

MAR 27, 2015

#178

# Apple Magazine™

**SECURITY**  
MISSING  
PASSWORDS

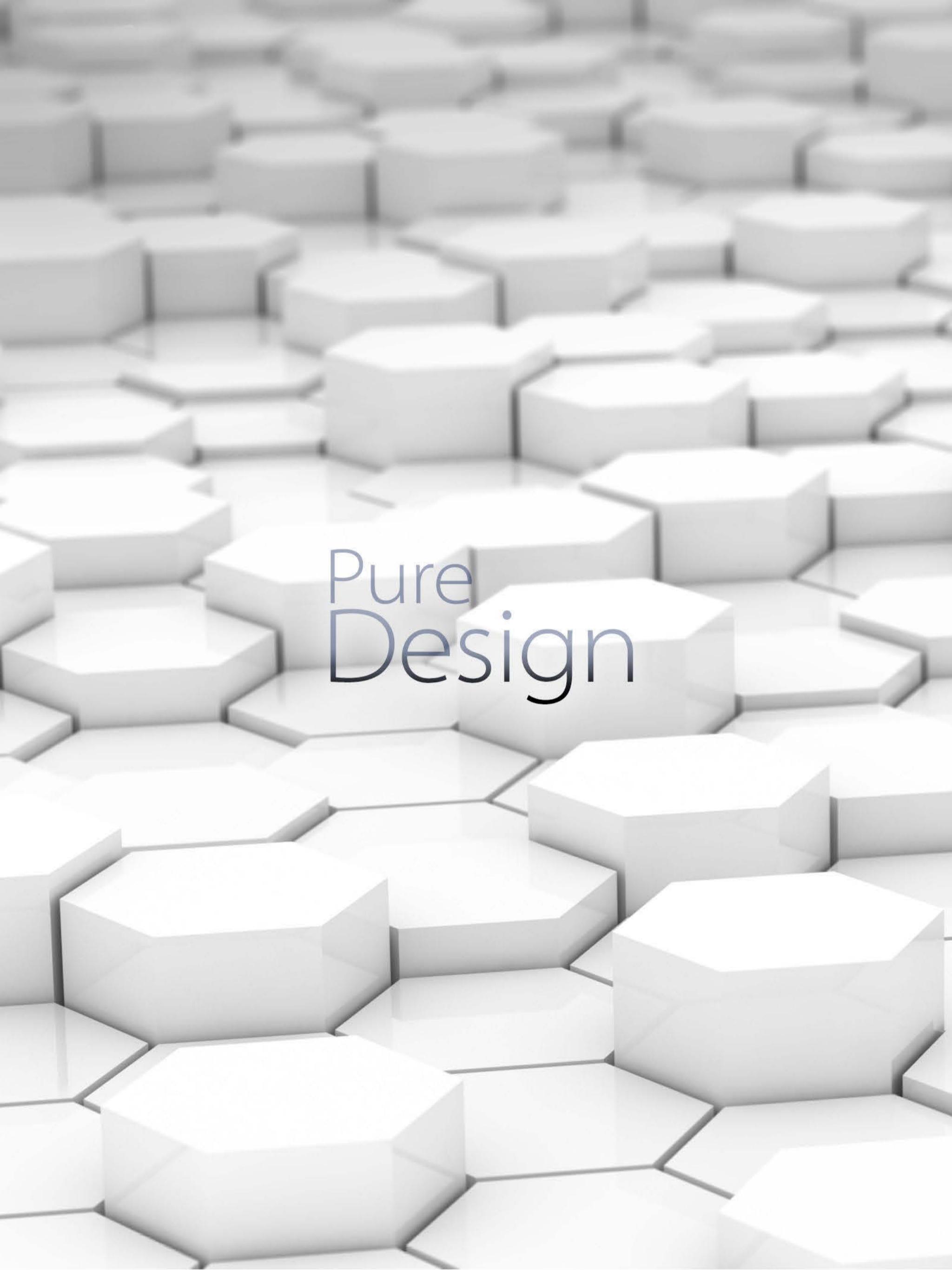
HERE ARE TWO NEW  
WAYS TO LOG IN

**CINDERELLA**  
MODERN  
CLASSIC  
BRINGS THE ROMANTIC  
FANTASY INTO 2015

# NEW MACBOOK

A REINVENTION OF THE NOTEBOOK





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ROMANTIC FANTASY INTO 2015



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Image: Olly



CAN'T REMEMBER YOUR  
PASSWORD? HERE ARE 2  
NEW WAYS TO LOG IN

Tired of trying to remember a different password for each of your online accounts? Or worried about re-using the same password too many times? You're not alone. Tech experts agree that traditional passwords are annoying, outmoded and too easily hacked.

This week, Yahoo and Microsoft offered up some alternatives: Yahoo says it can text temporary passwords to users' phones each time they want to sign into their Yahoo accounts. Microsoft says it is building facial-recognition and fingerprint-identification technology into Windows 10, the new computer operating system coming this summer, so users can log on with their fingertip or face. The two approaches drew different reviews.

Here's what you should know:

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## NEW DAY, NEW PASSWORD



Convenience and security. That's what Yahoo is promising users who choose to receive a single-use password "on demand" - sent by text message to their mobile phone each time they want to sign into their Yahoo account. Once you opt into the program, there's no more need to create or memorize a password for Yahoo's email or other services.

Not a good move, experts say.

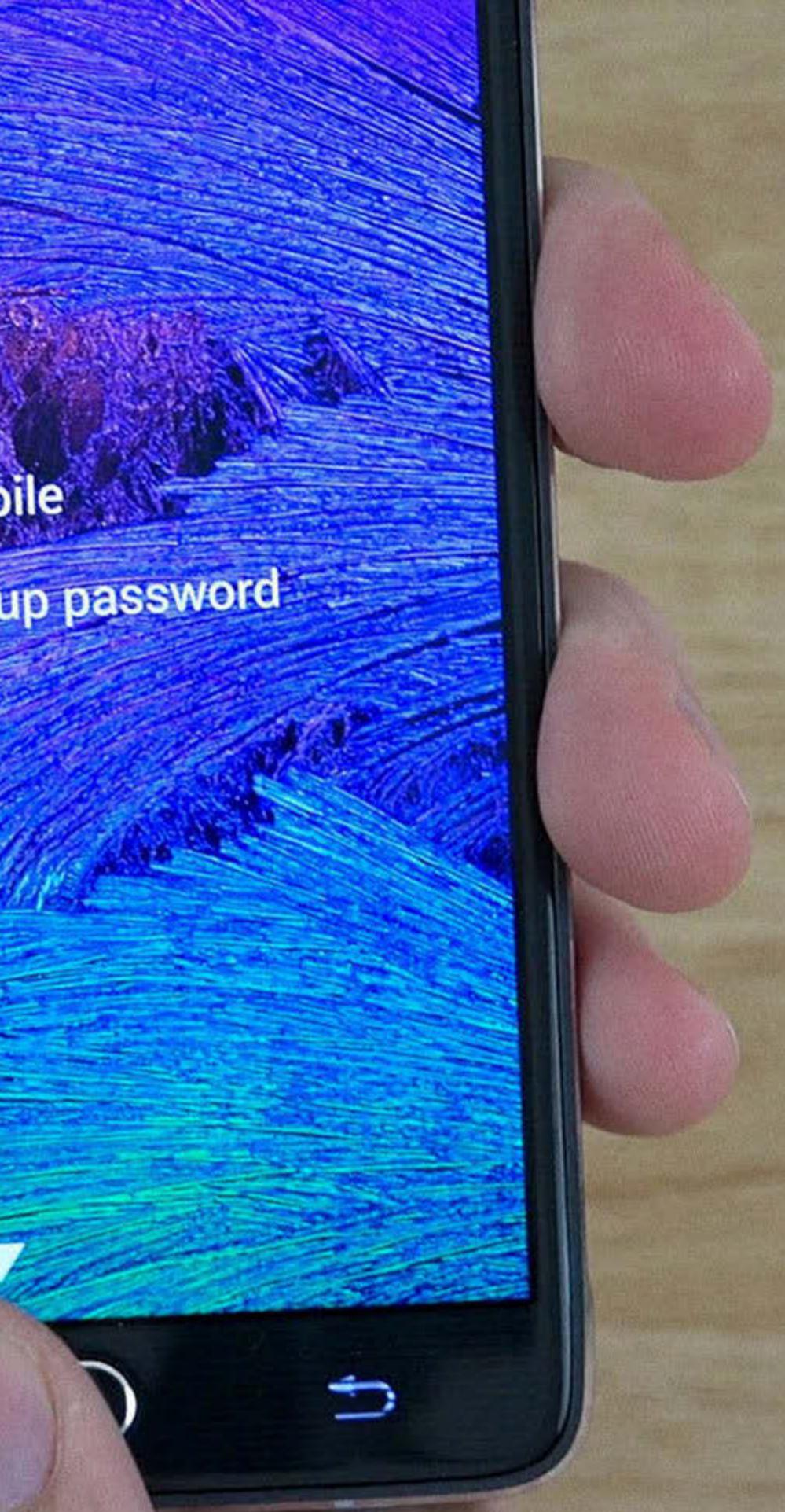
"Yahoo just made it easier for attackers to compromise an account," said Tim Erlin, risk strategist for the cybersecurity firm Tripwire. Temporary passwords can fall into the hands of anyone who steals your phone. While most phones can be set to require a separate password to unlock the home screen, many people don't bother to do so. Phones can also be infected with malware that intercepts or copies text messages, he said.

Though it may be convenient, Erlin said, Yahoo's on-demand option is a step backward from another alternative the company offers, known as two-factor authentication. With that option, users must provide both a traditional password and a one-time code that is texted to their phones. That's considered stronger because a hacker would need both to get into a user's account.

T-Mobile

Enter back





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Yahoo security chief Alex Stamos agrees that two-factor authentication is stronger. But many people don't use it, he said in an online post defending against critics. Instead, people too often recycle short passwords that are easier to type, especially on small phone screens, but also easy for hackers to guess, he said.

Since most online services let users reset passwords by sending a text or email to their phones, users are already vulnerable if they lose their device, Stamos argued.

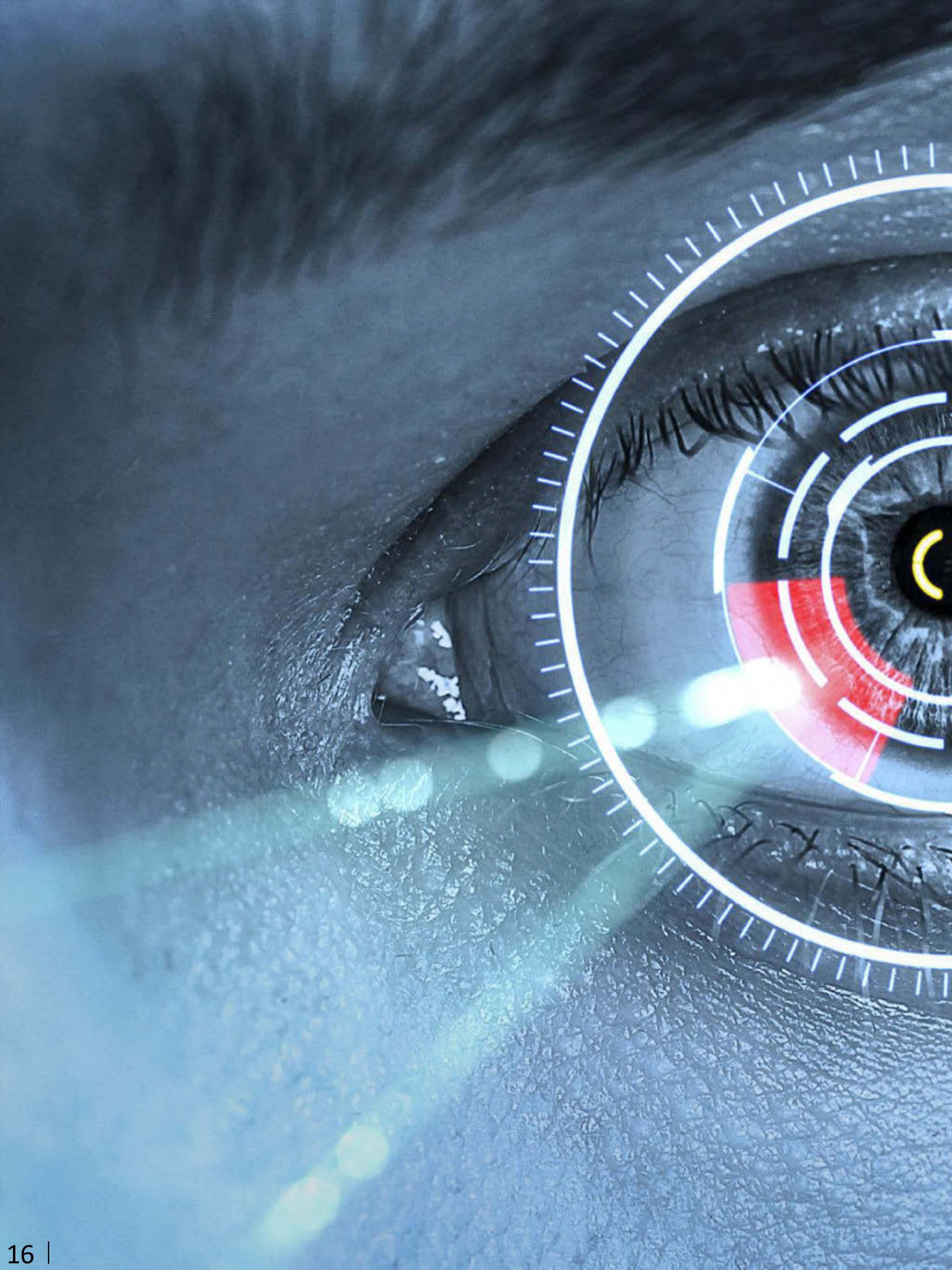
"The truth is that passwords are so incredibly, ridiculously broken that it is almost impossible to keep users safe as long as we have any," Stamos wrote on his Twitter account. He said Yahoo is working on other solutions.



## THE FUTURE

The concept of logging in by scanning your fingerprint or face used to seem like sci-fi. But the future is here.

Microsoft said this week that it is building “biometric authentication” technology into the next version of its Windows software, so that users can unlock computers or phones with their face, iris or fingerprint. The devices must have a fingerprint reader or a high-end camera with infrared sensors, which are becoming more common.

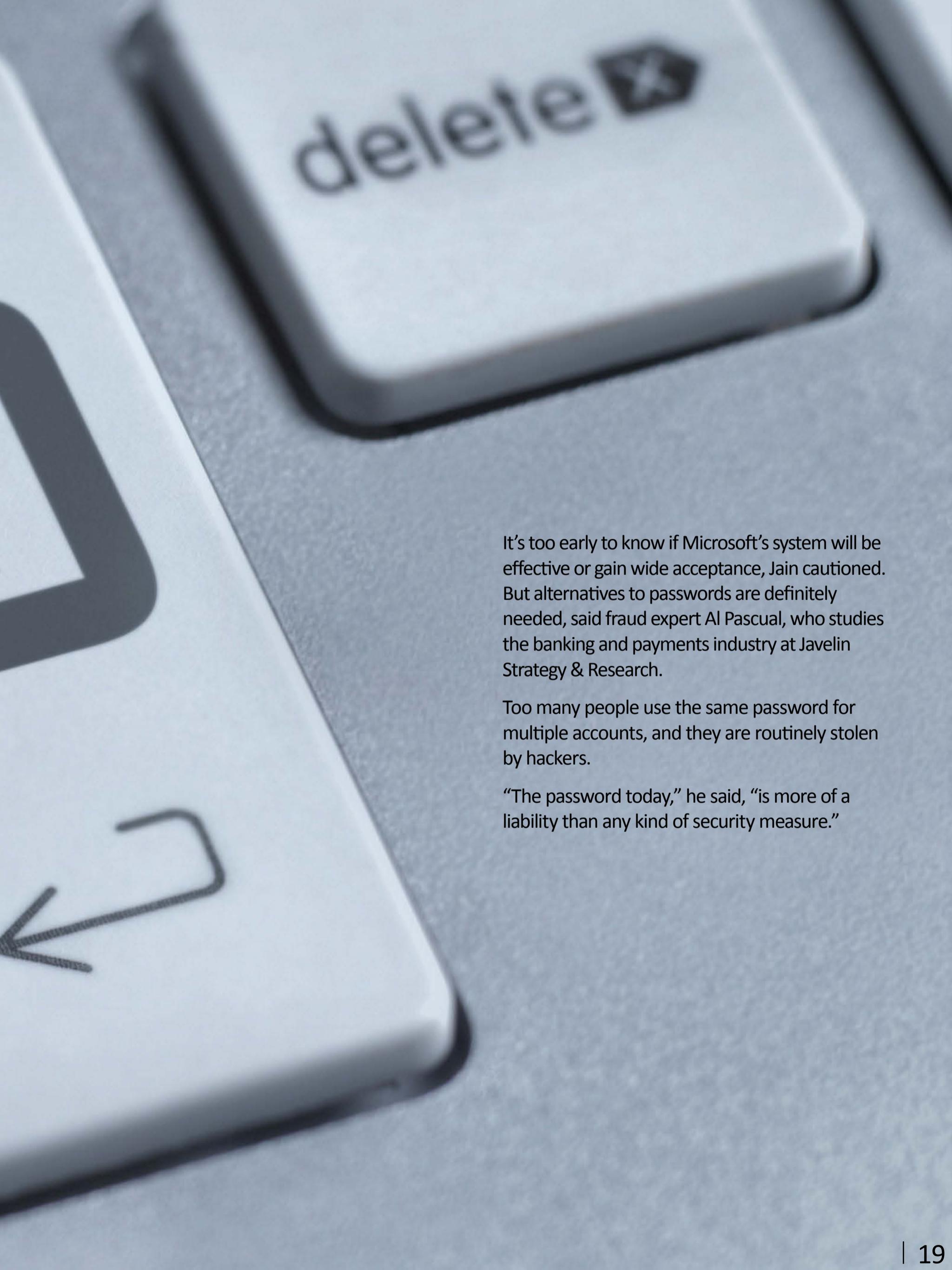




Windows 10 users may also be able to use their face or fingerprint to sign into other online accounts. Microsoft is providing related software to builders of independent apps and websites so they too can verify a user's identity through a combination of biometrics and an encrypted code automatically generated by the user's computer or phone, Microsoft Vice President Joe Belfiore wrote in a blog post.

Google already offers facial recognition as an option for unlocking Android phones, although it's not widely used. Early versions were criticized as unreliable, but the technology has improved, said Anil Jain, a biometrics expert at Michigan State University. Apple and Samsung offer fingerprint identification to unlock some phones; Apple also uses it to authorize purchases through Apple Pay.





It's too early to know if Microsoft's system will be effective or gain wide acceptance, Jain cautioned. But alternatives to passwords are definitely needed, said fraud expert Al Pascual, who studies the banking and payments industry at Javelin Strategy & Research.

Too many people use the same password for multiple accounts, and they are routinely stolen by hackers.

"The password today," he said, "is more of a liability than any kind of security measure."





# WITH 'DEAD RISING,' A NEW APPROACH FOR A GAME ADAPTATION

When a pair of filmmakers first approached video game publisher Capcom about crafting a live-action movie based on their popular zombie series *Dead Rising*, they were asked to prove themselves in a very specific way. The creators behind such video game franchises as *Street Fighter* and *Resident Evil* handed the movie producers a game controller.

They told me, 'Show me you love the game,' said Tomas Harlan, who along with business partner Tim Carter, is the brains behind Contradiction Films. The independent production company last brought supernatural martial-arts fighters to life with *Mortal Kombat Legacy*, a series of web shorts set in the world of Midway's long-running punch-out series.



Image: Crackle



Harlan wasn't deterred. He'd already maxed out level 50 at home.

After showing off some zombie-evading strategies, *Dead Rising Watchtower* was born. The straight-to-streaming movie is launching March 27 on Crackle, Sony's free, ad-supported online video service. (However, *Watchtower* can be viewed beginning Friday exclusively on the Crackle app for Xbox One and Xbox 360 consoles.)

Following the success of *Legacy*, whose second-season premiere has amassed more than 20 million views on YouTube, Harlan and Carter wanted to create another game adaption on a similar small scale as the *Mortal Kombat* series. The pair said such minimalism affords them more freedom and fewer expectations than most Hollywood productions.

Our way of producing is very different than a conventional feature film that costs \$100 million, said Carter, who also wrote the script for the movie. I think that most film studios usually have a standard operating procedure that you're not allowed to deviate from - and we deviate all over the place.

As attendance in movie theaters has dipped and streaming networks have strengthened, the duo also sees the digital medium as a boon, not a punishment. They're apparently not alone. Legendary, the production company best known for event movies like *The Dark Knight Rises* and *Pacific Rim*, signed on to co-produce *Watchtower* as their first digital movie with Contradiction Films.

This sort of project, by virtue of being digital, is a lot more nimble and creator-focused than a big-budget film would be, said Carter. That allows us to work more closely with the game developer and hold onto game canon in a way that wouldn't be possible if there were more cooks in the kitchen and it was a huge financial juggernaut.



Watchtower stars Desperate Housewives and Dallas co-star Jesse Metcalfe as a glory-chasing reporter stranded in a town being overrun by zombies and quarantined by the government. Virginia Madsen and Meghan Ory play fellow survivors, while Rob Riggle portrays Frank West, the protagonist from the first Dead Rising game released in 2006.











Unlike such game adaptations as *Doom* or *Resident Evil*, which veered off from the original source material on the big screen, *Watchtower* strictly exists in the same fictional realm as the *Dead Rising* games. There, the drug Zombrex keeps humans from transforming into flesh-eating creatures and gardening and sporting equipment taped together usually make for the best weapons.

After decades of unfaithful renditions, the mere mention of the term live-action video game adaptation usually provokes groans from gamers, but Harlan and Carter see the stigma as an opportunity where others have frequently flopped. In fact, they studied every previous live-action game adaptation before going into production on *Watchtower*.

In the past, there were a lot of hatchet jobs by executives in Hollywood, said Harlan. The intellectual properties were not authentic to them. They didn't grow up with them. It wasn't things they experienced. They just thought it was valuable and tried to adapt it in a very traditional, linear way. There's been a lot more failures than successes.

Harlan and Carter are already working on three more video game adaptations, and just because they think they've mastered bringing interactive fiction to life on a shoe-string budget doesn't mean they always want to keep pinching pennies.

We'd like to do this at all levels because certain games and story choices require different budgets, said Carter. We're approaching this with a thin-end-of-the-wedge strategy, and we're proving ourselves at this level. Hopefully, we're winning loyalties on both the studio and game development sides, which will give us freedom when we move to bigger budgets.

Online: <http://www.crackle.com>

# CINDERELLA

BRINGS THE ROMANTIC  
FANTASY INTO 2015

*Disney triumphs with re-imagined Cinderella*





## BOTH CRITICAL AND COMMERCIAL SUCCESS

Is it ever a good idea to remake a stone-cold classic, even if the decision to do so allows an old, well-remembered and still-relevant story to be brought up to the present day? Many who would have previously said "no" will have been forced to rethink their stance as a result of the staggering critical and commercial success of Disney's live-action reimagining of the immortal princess tale, Cinderella.

The Cinderella of 2015 is clearly as relevant as she has ever been, on the evidence of a movie that makes the best of use of its available talent and resources. It was directed by Kenneth Branagh and the screenplay was written by Chris Weitz, while production duties were handled by David Barron, Simon Kinberg and Allison Shearmur.

Taking the title role as Ella (Cinderella), meanwhile, is Lily James, who was joined by such other gold-standard actors as Richard Madden - who plays Prince Charming - and Cate Blanchett as Lady Tremaine, or the Wicked Stepmother. It's an impressive line-up for the intimidating task of living up to the Walt Disney animated film from 1950 - even if 2015's Cinderella is not a direct remake of that movie, instead looking back to the Charles Perrault fairy tale.

Such ingredients certainly seemed primed to deliver success for Cinderella from the moment it had its world premiere in the out of competition section of the 65th Berlin International Film Festival last month. It's fair



Image: Jonathan Olley





Image: Jonathan Olley







to say that the film hasn't disappointed in either a critical or commercial sense.

## ASTOUNDING BOX OFFICE SUCCESS

If there was a film that lived happily ever after at the box office, **it was certainly Cinderella, which raked in \$132.5 million across the world on its debut March 15 weekend.** \$70.1 million of that was accounted for by 3,845 theaters in the United States, with a record-smashing \$25 million also being generated in China. Such figures also made it Branagh's biggest ever opening as a director.

These numbers also represent another massive triumph for Disney, as it continues to produce live-action versions of its most affectionately remembered animated tales. Last time out, Maleficent - a re-imagining of the 1959 classic Sleeping Beauty from the villainess Maleficent's perspective - grossed an astonishing \$758.4 million worldwide.

However, Cinderella's feats may be even more impressive, given that it lacks the known entity in the starring role that Maleficent has in the form of Angelina Jolie - Lily James being more familiar from Downton Abbey. What's more, Maleficent was in 3D, while Cinderella is not. Despite those factors, Cinderella would seem to have not only shaded the \$69.4 million domestic debut of Maleficent, but also recorded one of the biggest March openings ever - sixth in the all-time list.

As Disney distribution chief Dave Hollis observed: "The challenge in marketing the movie was that there was no twist, unlike





Maleficent or Oz. We were rolling out the quintessential version of the classic story. The danger was that people could say, 'I already know what the story is,' but the marketing team brought to the market creative materials that did an incredible job of creating a sense of urgency."

## WHAT THE REVIEWERS HAVE BEEN SAYING

Cinderella has been no less of a juggernaut in the minds of professional critics, David Rooney of The Hollywood Reporter leading the way in declaring that "the color, vibrancy and unabashedly romantic heart explode off the screen", and "the studio's opulent update is **enhanced by sumptuous physical craftsmanship** as well as the limitless possibilities of what CG technology can achieve." He also praised Weitz for embracing "both the magic and the humanity of the classic fairy tale."

Anthony Lane of The New Yorker gave a similarly resounding thumbs up, commenting that "there is barely a frame of Branagh's film that would cause Uncle Walt to finger his mustache with disquiet. ... At a time when that deconstructive urge is the norm, and in an area of fiction — the fairy tale — that has been trampled by critical theory, Branagh has delivered a **construction project so solid, so naive, and so rigorously stripped of irony that it borders on the heroic.**" He also had warm words for the movie's costumes.



Image: Jonathan Olley



Another writer, Rex Reed of *The New York Observer*, didn't hesitate to give the movie probably the warmest possible salute, saying that "**there is no denying the fact that this is the best Cinderella of them all.**" The member of the cast that he described as "the cherry on top of the cake" was "a sinister and captivating Blanchett... Scheming, sultry and seductive, her Lady Tremaine shows why she's disillusioned — widowed by two husbands while still young and left to raise a pair of dumb daughters she doesn't even like, her resentment of Ella's beauty and sweetness is only natural. And in the end, there's a refreshing surprise."

Not all of the verdicts were uniformly positive, of course, with Chicago Tribune's Michael Phillips, while calling the film "satisfying" and "refreshingly free of all snark", claiming that the effects were "routine". He added: "**I'd like to see a live-action Disney fairy tale with a little less** of that business and a little more practical magic." Nor was he a fan of what he described as "a persistent dribbling stream of forgettable mood music" by composer Patrick Doyle.

## WHY 2015'S CINDERELLA COULD BE THE BEST OF THEM ALL

There have been many Cinderella adaptations over the years, including in opera, ballet and theater, as well as in film and television. The fairy tale has had a particularly illustrious career on the big screen, since the first Cinderella film in 1899. Of the subsequent versions, it is surely Disney's 1950 animated picture that is the benchmark. But could the 2015 version be even better? That is certainly the opinion of some writers.

Just ask Hollywood Life writer, Avery Thompson. In a piece entitled *Cinderella: 5 Reasons Why It's The Fairy Tale's Best Movie Ever*, she pointed out several aspects of the new flick that she felt made it the pick of the crop of big screen *Cinderellas* to have been produced so far. She admitted that while she was "a die-hard fan of Disney's animated version of *Cinderella*", the new live-action version meant that "I've changed my tune".







Image: Jonathan Olley



Thompson hailed Lily James' ability to "break out of the Cinderella mold", saying that "by the end of the movie, I saw Cinderella differently than I have after finishing other movies based on the character. This Cinderella was kind but bold. Gracious but not fragile. Lily's nuanced performance really pushed her to the top in my book." **Praise was also forthcoming for the chemistry between her and co-star Richard Madden**, the "spot-on" performances of other key characters, the intricate and beautiful set and costume design and, of course, the movie's all-round effectiveness as a touching love story.





## A TRUE CINEMATIC FAIRYTALE

In today's post-ironic age, it might have seemed to many that the era of the old-fashioned, honest-to-goodness fairytale had come to an end. Sure enough, while there has been a tendency in recent times for some animated classic fairytales to be granted the live action treatment, these new versions have almost always swapped the charming feel of old for a darker, more brooding ambience.

This new Cinderella is different. It is a true cinematic fairytale of the old school, one that makes all who watch it feel re-energized and ready to believe in the power of dreams once more. It has a sense of magic, something that





has sometimes been surprisingly lacking, even in films of this category, in recent times.

That age-old story of Cinderella as the lovely young girl who, following her father's death, is forced to keep her own house for her atrocious step-family has never truly 'got old', and it's hard to think of a better demonstration of this evergreen tale's continuing relevance in the year 2015 than Branagh's Cinderella. ■

by Benjamin Kerry & Gavin Lenaghan



YAHOO SHUTTING  
DOWN CHINA  
OFFICE IN LATEST  
COST-CUTTING  
MOVE





HOO!

Yahoo is closing its research and development center in China as CEO Marissa Mayer tries to placate shareholders pressuring the Internet company to cut costs while it struggles to bring in more revenue.

The Beijing operation's responsibilities will be shifted to other Yahoo Inc. offices, according to a company statement released late Wednesday. Yahoo didn't specify how many people will lose their jobs in China, but pledged to treat all the workers with respect and fairness.

The closure will mark Yahoo's exit from China, where the Sunnyvale, California, company has been winding down since turning over its operations to Alibaba Group in 2005.

That \$1 billion deal gave Yahoo a lucrative stake in Alibaba that is currently worth \$33 billion. Yahoo is preparing to spin off its Alibaba holdings into a separately traded company later this year, removing an asset that deflected attention from the challenges facing Yahoo's own businesses.



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Yahoo hired Mayer in July 2012 to engineer a turnaround, but so far she hasn't been able to boost the company's revenue even though advertisers have been shifting more of their spending to the Internet and mobile devices. Yahoo's revenue declined by 1 percent to \$4.6 billion last year.

New York hedge fund Starboard Value, an activist investor that owns a 0.8 percent stake in Yahoo, is among the shareholders who believe Mayer needs to trim expenses. In an open letter released earlier this month, Starboard Value Managing Member Jeffrey Smith urged Mayer to cut costs by about \$450 million annually. Smith is also among the Yahoo shareholders who called upon Mayer to spin off the Alibaba stake to avoid triggering a huge tax bill from sale of the stake.

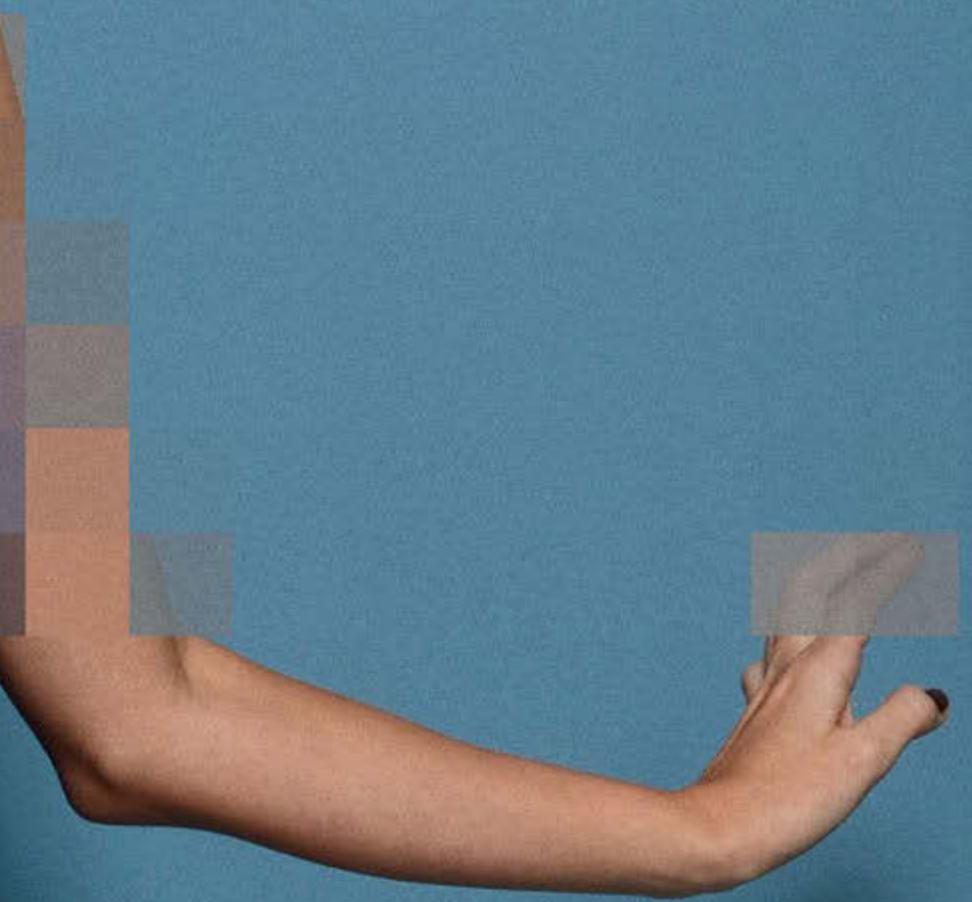


In a January conference call, Mayer emphasized that Yahoo's payroll has remained roughly the same size since she arrived, even though the company had inherited more than 1,000 employees through acquisitions completed during her reign. She also pointed out that Yahoo had closed about a dozen offices while phasing out about 75 products during her tenure.

We will continue to seek and execute on efficiencies that we find on an ongoing basis as an effort to better align our resources with our strategy and growth opportunities, Mayer pledged.



# TAYLOR SWIFT, MICROSOFT AMONG THOSE BUYING UP .PORN SUFFIXES



The singer Taylor Swift, Microsoft Corp. Harvard University are among those buying up .porn and .adult Web suffixes as a pre-emptive move before those domain names become available this summer.

The Internet Corporation for Assigned Names and Numbers, or ICANN, is making Internet address suffixes beyond the usual .com or .org available for people and businesses to use. While some are in Chinese or other languages besides English, others could include the likes of .music, .app or, of course, .porn.

To check what brands, groups and celebrities have bought their domain names, visit <http://icmregistry.com/domaincheck>.

According to the site, Microsoft has bought not only Microsoft.porn but Office.porn and Office.adult as well.

Representatives for Taylor Swift, Microsoft and Harvard could not immediately be reached for comment.



soia®





# What you need to know about the new MacBook

A REINVENTION OF THE NOTEBOOK

## REVAMPED KEYBOARD AND NEW USB-C PORT

You might have missed it at a recent Apple keynote where much of the limelight was on (once again) the Apple Watch and such other announcements as HBO NOW, but the Cupertino firm also showed off a refresh of its venerable notebook range that is well worth a second look. A thinner, lighter and all-new MacBook was given an airing, along with such features as a revamped design, revised keyboard and introduction of a USB-C port.

At least as interesting as the device itself, however, is how it was introduced at the March 9 event at the Yerba Buena Center for the Arts in San Francisco, with Apple CEO Tim Cook first reeling off some typically impressive statistics about the Mac's success. He stated that "for every year for the last decade the Mac has outgrown the industry. And if you look at notebooks, it's even more telling. **Last year the industry notebook sales shrunk by 2 percent and the Mac grew over 21 percent.**"

He went on to refer to how the iPhone and iPad had altered the portability game over the years, adding: "So we challenged ourselves to take everything that we had learned designing iPhone and iPad and do something incredibly ambitious and bold. We challenged ourselves to reinvent the notebook. And we did it. And here it is."





## A TOP-TO-BOTTOM RE-IMAGINING OF THE NOTEBOOK

Now, an introduction like that may have given you the impression that a more dramatically new product was about to be unveiled - perhaps the ultimate 'hybrid' of an iDevice and the traditional notebook. Alas, the company didn't quite go that far, but the specification of what it did reveal certainly impressed.

The new device, simply named the MacBook, not only shaves pounds and inches off this popular product line as one has to come to expect from almost every new piece of Apple hardware, **but also incorporates such features as a 12-inch Retina display, a full-size keyboard, what is known as the Force Touch trackpad and a new battery that is designed to last all day.** There's also a compact USB-C connector that, within one connector, caters for data transfer, video out and charging.

As Apple's senior vice president Worldwide Marketing, Philip Schiller commented: "Apple has reinvented the notebook with the new MacBook, and at just two pounds and 13.1 millimeters, it's the thinnest and lightest Mac ever."

## THE FEATURES THAT MAKE THE MACBOOK STAND OUT

Schiller's subsequent claim that "Every component of the MacBook reveals a new innovation" surely begs for a closer examination of the new notebook's feature set. Signifying its belief that a great notebook



Image: Alice Truong / Matthew Strand

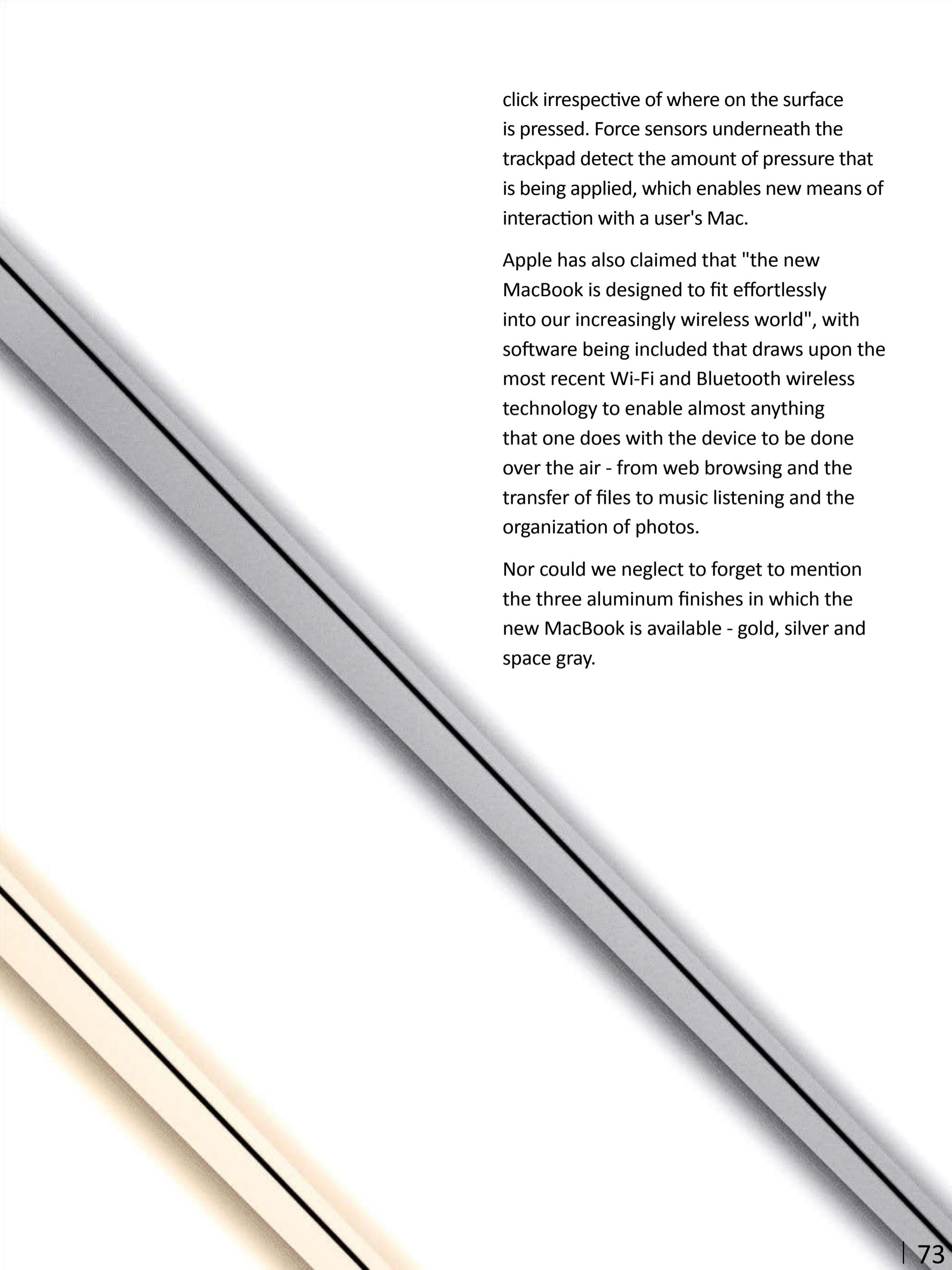


experience depends on a comfortable full-size keyboard, Apple set to work on completely rethinking the manner in which such a keyboard is engineered and constructed, with each key and its underlying mechanism having apparently been redesigned.

The company has claimed that such diligent attention to detail has resulted in not merely a "much thinner" keyboard, but also one that is more comfortable and precise and that provides more responsive typing. But the firm has also raved about such other features as a "gorgeous 12-inch Retina display with edge-to-edge glass [that] brings everything into focus", combining a 2304 x 1440 resolution with a 16:10 aspect ratio.

Then, there's the Force Touch trackpad that has been said to completely alter the trackpad user experience on notebooks, being designed to deliver a responsive, uniform





click irrespective of where on the surface is pressed. Force sensors underneath the trackpad detect the amount of pressure that is being applied, which enables new means of interaction with a user's Mac.

Apple has also claimed that "the new MacBook is designed to fit effortlessly into our increasingly wireless world", with software being included that draws upon the most recent Wi-Fi and Bluetooth wireless technology to enable almost anything that one does with the device to be done over the air - from web browsing and the transfer of files to music listening and the organization of photos.

Nor could we neglect to forget to mention the three aluminum finishes in which the new MacBook is available - gold, silver and space gray.



## WHAT REVIEWERS MADE OF THE MACBOOK

The MacBook sports many more features than those, but what did the 'hands on' reviewers think of it? One of those writers was Ashleigh Allsopp, **who wrote for Macworld that "You'll immediately notice the bright, vivid and detailed Retina display on the new MacBook."** She added: "Pick up the MacBook and you'll be amazed by how thin and light it is."

Another Macworld writer, Susie Ochs, found that using the revamped MacBook's keyboard didn't leave her fingers feeling as cramped as they did when she was using an iPad-sized keyboard. However, some other reports did suggest that it was difficult for the user to tell when they had actually pressed a key, the feeling being more akin to a touchscreen than a physical keyboard.

TechRadar's Gareth Beavis also weighed in with his verdict on the machine, marveling that it was "so light that you could mistake it for a half-empty sheath of papers. Holding it in one hand is quite unnerving, as you feel you could snap it without holding properly." **His overall experience was a positive one, as he described the MacBook as "a great design from Apple".**





## **A NEW USB-C PORT 'PUTS EVERYTHING IN ONE PLACE'**

When it comes to charging your MacBook, you will naturally need to connect your charger to a port, and there have been new developments on that front, too. In order to make its new MacBook's port "the most advanced and versatile one available", the company has introduced a USB-C port that is one third of the size of the current USB port.

A new port may be inconvenient news for those who were hoping not to be forced



to switch to a new charger, but Apple has claimed that the change makes a big difference in the "charging, speedy USB 3 data transfer, and video output" that it enables over more outdated standards like USB Type-A and Type-B.

Although Universal Serial Bus (USB) cables remain ubiquitous in people's homes, with three billion USB ports being shipped every year, they have faced increasing competition in recent times from the speed and ease of use offered by the new Thunderbolt standard. With the USB-C - or USB Type-C - standard having only been finalized late last year, **it's fair to say that owners of the new MacBook will benefit from the latest technology in this field.**



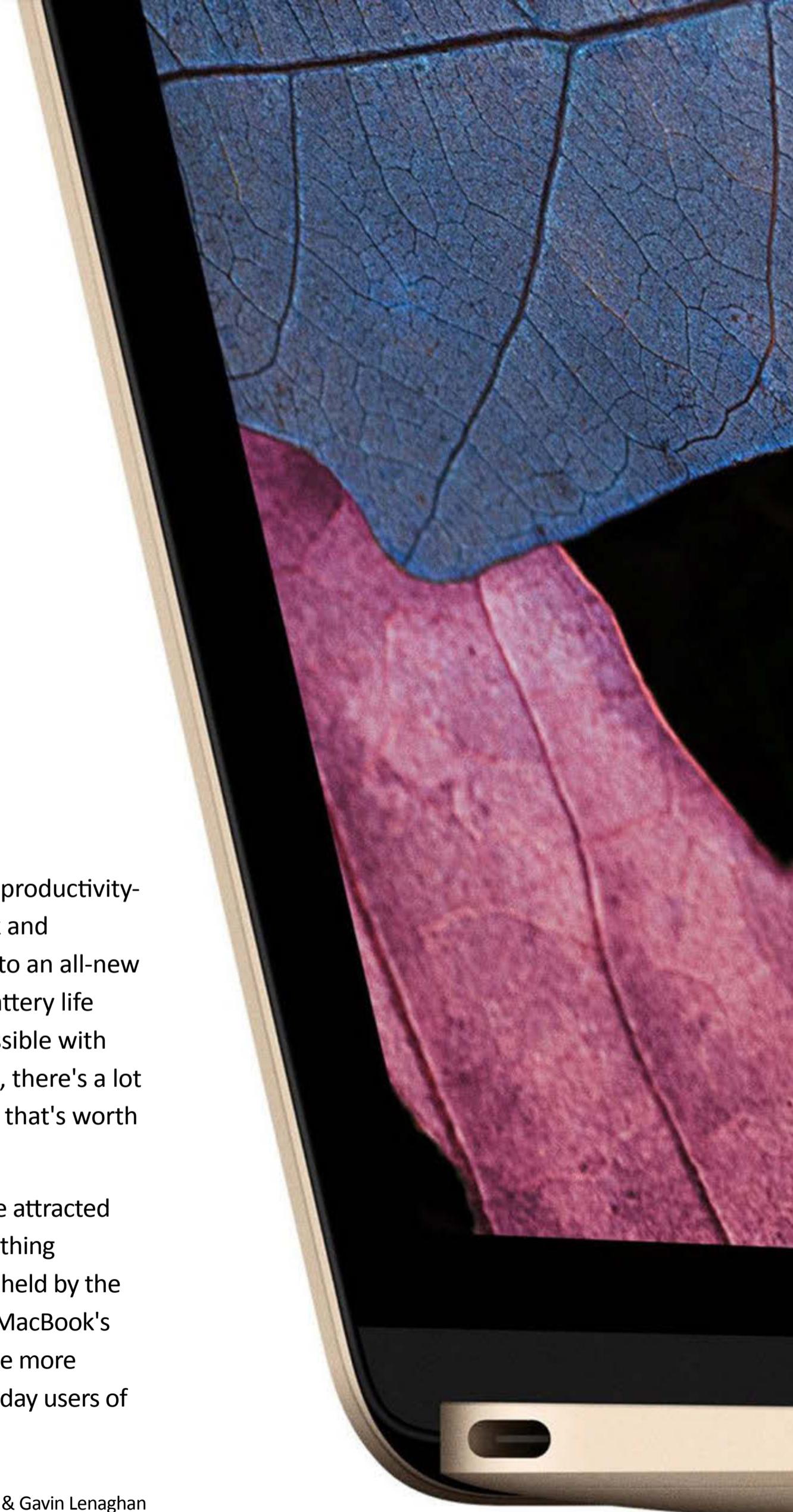


## THE MACBOOK: REASON FOR EXCITEMENT

If you're in the market for a new notebook, the MacBook may have arrived at the perfect time for you. It may not seem at first inspection to be the complete re-imagining of the whole concept of the notebook that Tim Cook's on-stage introduction might have led people to expect, but it certainly offers a lot of promise for those desiring the best performance and user experience.







From the new device's range of productivity-oriented apps and the ever-slick and efficient OS X operating system to an all-new battery design that ensures a battery life long beyond what would be possible with traditional rectangular batteries, there's a lot about the overhauled MacBook that's worth raving about.

While the Apple Watch may have attracted the most column inches of everything shown off at the latest big event held by the boys and girls at Cupertino, this MacBook's announcements might just be the more significant news for most day-to-day users of Apple technology. ■

by Benjamin Kerry & Gavin Lenaghan



MacBook

# CHINA WEB FREEDOM GROUP FACES ONLINE DISRUPTION

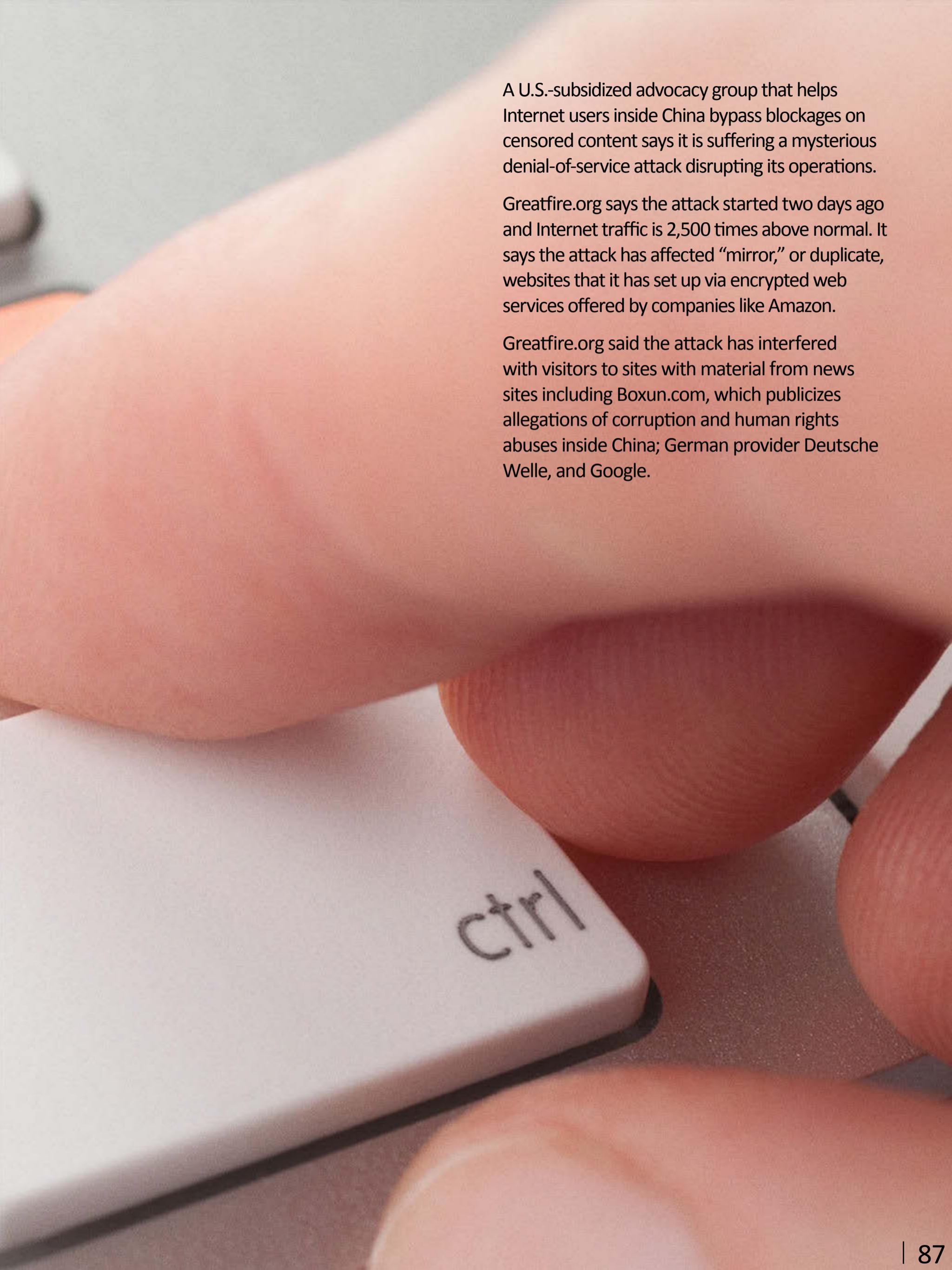






censor

alt



A U.S.-subsidized advocacy group that helps Internet users inside China bypass blockages on censored content says it is suffering a mysterious denial-of-service attack disrupting its operations.

Greatfire.org says the attack started two days ago and Internet traffic is 2,500 times above normal. It says the attack has affected “mirror,” or duplicate, websites that it has set up via encrypted web services offered by companies like Amazon.

Greatfire.org said the attack has interfered with visitors to sites with material from news sites including Boxun.com, which publicizes allegations of corruption and human rights abuses inside China; German provider Deutsche Welle, and Google.



Image: Stringer



The statement from a co-founder of the group, who goes by the pseudonym Charlie Smith, said it's not clear who is behind the attack, but it coincides with increased pressure on the organization over the last few months and public criticism from Chinese authorities.

Zhu Haiquan, spokesman of the Chinese Embassy in Washington, said: "As we have always stated, Chinese laws prohibit cyber crimes of all forms. The Chinese government is making great efforts to combat cyber crimes and safeguard cybersecurity. Jumping to conclusions and making unfounded accusations is not responsible and is counterproductive."

The Chinese government blocks thousands of websites to prevent what it deems politically sensitive information from reaching Chinese users, an effort dubbed the Great Firewall.

According to the free-expression watchdog Freedom House, since late 2013 Greatfire.org has been hosting content on domains owned by Amazon and other major companies, which officials cannot risk censoring because of their large commercial footprint within China.

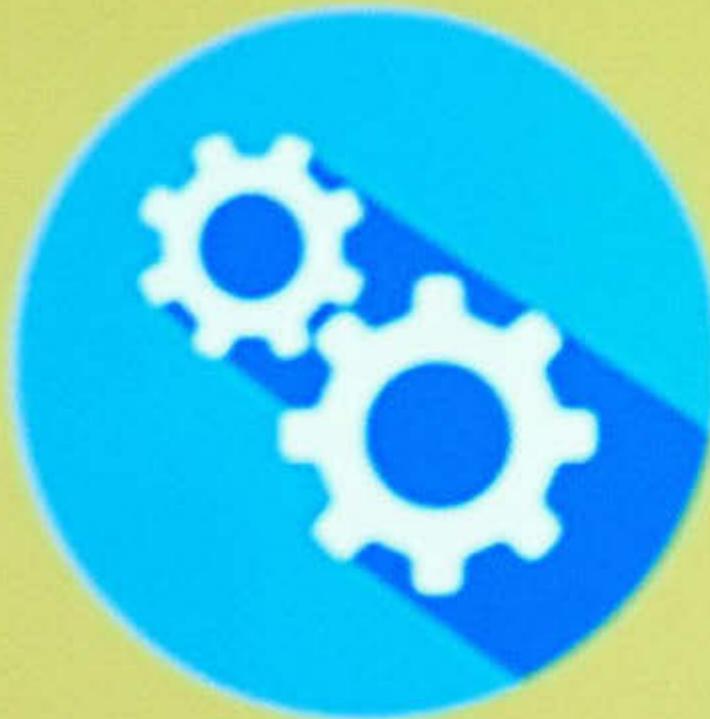
Smith said the current denial-of-service attack that is flooding the mirror websites is costing the group up to \$30,000 per day in bandwidth. He told The Associated Press by phone that Greatfire.org is in contact with Amazon about how to deflect the attack. He said the company has not yet confirmed whether it will forgo the inflated charges.

An Amazon spokesman did not immediately respond to an email seeking comment.

The Open Technology Fund, a U.S.-government-backed initiative to support Internet freedom, says on its website it provided Greatfire.org with \$114,000 in 2014.

Greatfire.org says it gets its funding from a variety of sources, including from people and organizations inside China.

# OBAMA, WOWED BY YOUNG SCIENTISTS, ANNOUNCES NEW STEM PLEDGES



## The White House SCIENCE

The small Lego machine inside the White House whirred, and in a moment it was turning the pages of a story book. One page flipped, then another, ever faster as President Barack Obama marveled at its efficiency.

The contraption's eventual aim would be to allow paralyzed or arthritic patients to read books despite their disabilities.



"How did you figure this out?" Obama, impressed, asked its inventors.

"We had a brainstorming session," one of the five 6-year-old Girl Scouts replied.

The kindergartners and first graders from Tulsa, Oklahoma, were among 35 young science fair winners who came to the White House Monday to showcase breakthroughs ranging from spinal implants to carbon-dioxide powered batteries to a keystroke identity system that can backup computer password securities.

Obama used the science fair event to highlight private-sector efforts to encourage more students from underrepresented groups to pursue education in science, technology, engineering and math. He announced more than \$240 million in pledges to boost the study of those fields, known as STEM. This year's fair is focused on diversity.

While awed by all of the displays, none seemed to delight Obama more than the Lego page-turner.

Obama allowed as to how the device might need a little adjustment given that, at the current speed, a reader might only catch three sentences in a page.

"It's a prototype," one of the Girl Scout designers replied matter-of-factly.

"Have you ever had a brainstorming session yourself?" one little girl asked.

Indeed, yes, the president replied.

"What did you come up with?"

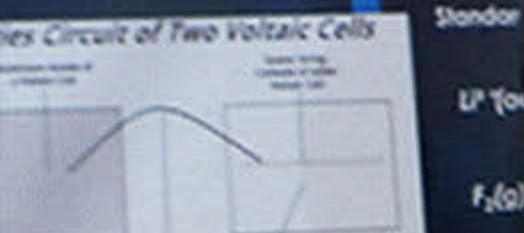
"I mean, I came up with things like, you know, health care," he said, amused. "It turned out ok, but it started off with some prototypes."

The pledges the president announced include a \$150 million philanthropic effort to encourage promising early-career scientists to stay on track and a \$90 million campaign to expand STEM opportunities to underrepresented

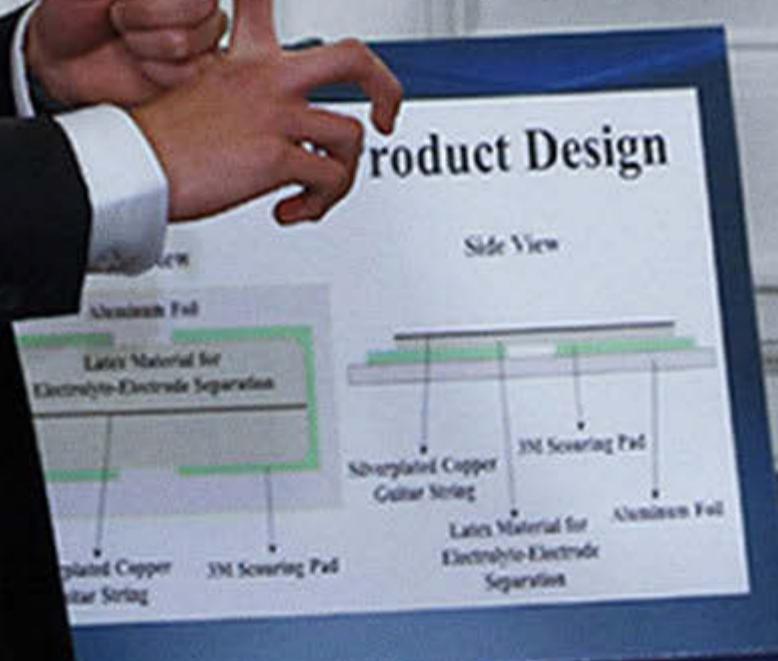




### PolluCell: Searching for a Viable Energy Source



### Product Design









youth, such as minorities and girls. Altogether, the new STEM commitments have brought total financial and material support for these programs to \$1 billion.

“It’s not enough for our country just to be proud of you. We’ve got to support you,” Obama said later, addressing students and scientists in the White House East Room.

More than 100 colleges and universities have committed to training 20,000 engineers, and a coalition of CEOs has promised to expand high-quality STEM education programs to an additional 1.5 million students this year.

Obama launched “Educate to Innovate,” his effort to encourage the study of science, technology, engineering and math, in 2009.

Obama said the fair is one of the most fun events held annually at the White House. “Every year I walk out smarter than when I walked in,” Obama said.

Indeed, Obama’s science adviser, John Holdren, joined the president during the tour of the displays, introducing himself to the young inventors and researchers. “Amazing,” he said. “These kids are so much more advanced than when I was in school.”

At each of the 12 display stations, Obama quizzed the participants about their projects. At one, Anvita Gupta, a 17-year-old from Scottsdale, Arizona, described the special algorithm she had devised to identify other medical applications for existing drugs.

Obama turned to the group of reporters and photographers trailing him.

“Just saying, I don’t know what you all have been doing,” he said. “This is what she’s been doing.”

# EXPERT: SILICON VALLEY BIAS SUIT SPURS CLOSER LOOK BY FIRMS

A sex discrimination trial that has put a spotlight on gender imbalance in Silicon Valley has prompted some technology and venture capital companies to re-examine their cultures and practices - even before a jury reaches its verdict.

As jurors get ready to hear closing arguments in Ellen Pao's lawsuit against the venture capital firm Kleiner Perkins Caufield & Byers, other companies have been contacting consultants about possible obstacles to women being hired and advancing. Still other companies have been seeking female candidates for partner positions.

A verdict against Kleiner Perkins would likely accelerate that trend, some consultants say.





Consultant Freada Kapor Klein said she has been contacted by more than a dozen venture capital and technology companies asking her how they can improve the environment for women. Klein, whose firm specializes in addressing bias in the workplace, declined to name the firms but said they approached her as a result of the Pao case.

“People understand that the issues raised in this trial are about company culture in general,” Klein said.

Closing arguments are expected Tuesday in the Pao case, with a jury then deciding if Kleiner Perkins discriminated against Pao and retaliated when she complained.

A judge ruled over the weekend that Pao can seek punitive damages that could add millions of dollars to a possible verdict in her favor. She is seeking \$16 million in lost wages and bonuses.

Experts say Pao’s case has increased awareness about seemingly small indignities faced by women in the technology and venture capital sectors.

“These subtle incidents individually seem trivial, but cumulatively create a climate that is unwelcoming,” said Deborah Rhode, a law professor at Stanford University who teaches gender equity law.

Pao’s attorneys have portrayed her as the victim of a male-dominated culture at Kleiner Perkins, where she was excluded from an all-male dinner at the home of Vice President Al Gore; asked to take notes like a secretary at a meeting; and subjected to talk about pornography aboard a private plane.

When she complained, she said, the firm hired a biased investigator who dismissed her allegations. When she sued, she said the firm fired her in 2012.

Kleiner Perkins has countered that Pao was a chronic complainer who twisted facts and



circumstances in her lawsuit and had a history of conflicts with colleagues that contributed to the decision to let her go. She also didn't cut it when her job shifted to mostly investing in 2010, they say.

During the trial, Pao and officials with Kleiner Perkins addressed the larger issue of gender inequities in the venture capital sector, where women are even more underrepresented than they are in the technology sector.

Pao told jurors that her lawsuit was intended in part to create equal opportunities for women in the venture capital sector.

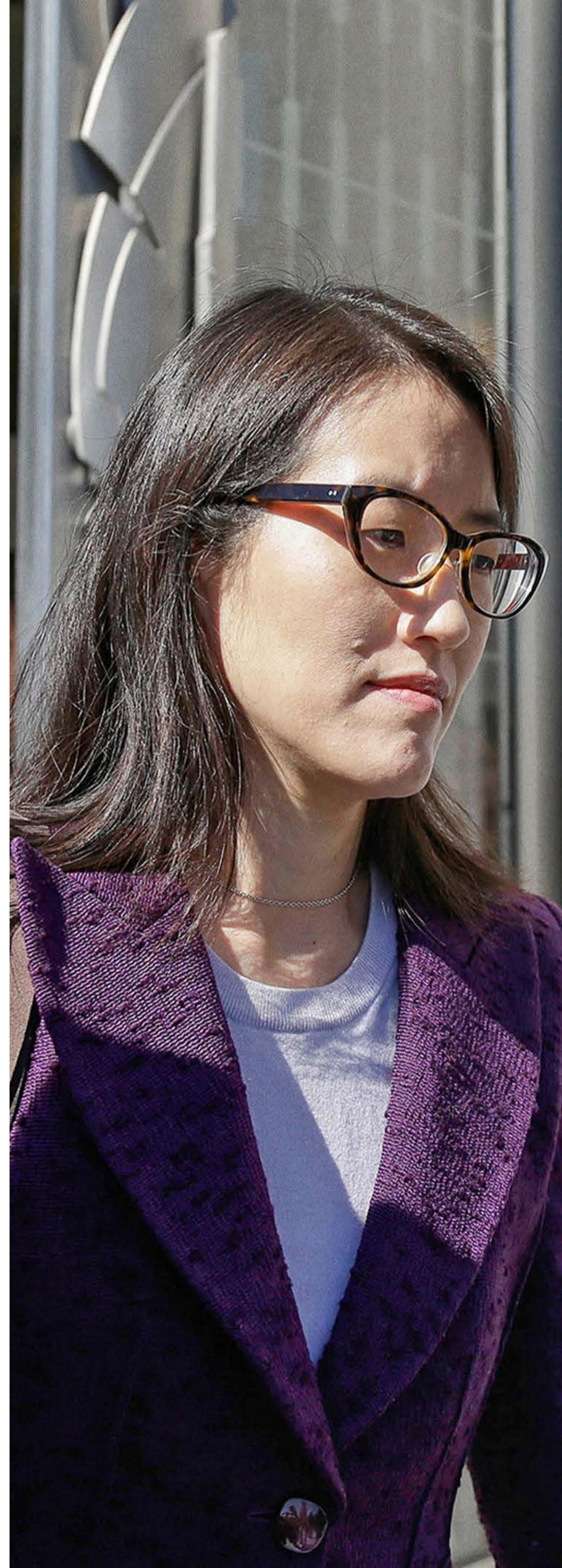
Paul Gompers, a Harvard business school professor, was hired by Kleiner Perkins to conduct research about the venture capital industry. He testified that Kleiner Perkins placed more women on the boards of companies in which it invested than any of the 3,000 venture capital firms that he reviewed.

However, a study released last year by Babson College in Massachusetts found that women filled just 6 percent of partner-level positions at 139 venture capital firms in 2013, down from 10 percent in 1999.

Since Pao's case began generating headlines, more venture capital firms have called seeking female candidates for partner-level positions, said Joe Riggione, co-founder of True, an executive search firm for venture capital and technology companies.

Technology and venture capital firms have become more open over the past two years about discussing gender and racial inequities, said Nicole Sanchez, founder of Vaya Consulting, which tries to help Silicon Valley companies increase diversity.

Sanchez said that's due in part to a decision by Google and other technology giants to release data about the demographic makeup of their









workforces. The numbers weren't good - women hold just 15 to 20 percent of tech jobs at Google, Apple, Facebook and Yahoo.

Facebook is also facing a lawsuit by a former employee alleging gender discrimination. The company disputes the claim and spokeswoman Genevieve Grdina said Facebook has been discussing diversity well before the Pao trial.

Sanchez said a verdict in favor of Pao could shake Silicon Valley.

"The fear it will strike in the hearts of companies in Silicon Valley depends on the verdict and the damage amount, how much it's going to hurt them," she said.

# TEST TRIAL TO USE COMPUTER SERVERS TO HEAT HOMES

An energy company is joining forces with a tech startup to harness computing power to heat homes in the Netherlands.

Eneco, a Dutch-based energy company with more than 2 million customers, said Tuesday it is installing “e-Radiators” - computer servers that generate heat while crunching numbers - in five homes across the Netherlands in a trial to see if their warmth could be a commercially viable alternative for traditional radiators.

The technology is the brainchild of the Dutch startup company Nerdalize, whose founders claim to have developed the idea after huddling near a laptop to keep warm after their home’s thermostat broke and jokingly suggesting buying 100 laptops.

“Ten minutes later, we thought: ‘That’s not such a crazy idea,’” said Boaz Leupe, one of Nerdalize’s founders.





Nerdalize says its e-Radiators offer companies or research institutes a cheaper alternative to housing servers in data centers. And because Nerdalize foots the power bill for the radiators, Eneco customers get the warmth they generate for free.

The companies said the environment wins, too, because energy is effectively used twice in the new system - to power the servers and to heat rooms.

The servers used in the system can be connected by cloud computing. Eneco said the computers will be used by institutions including the Leiden University Medical Center to run complex calculations in their research.

The trial will run at least through the end of the year. When it is completed, the companies will decide whether to make the system available to more customers.





# TOP Free Apps

iOS



## #01 – Facebook Messenger

By Facebook, Inc.

Category: Social Networking

Requires iOS 7.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



## #02 – Facebook

By Facebook, Inc.

Category: Social Networking

Requires iOS 7.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



## #03 – YouTube

By Google, Inc.

Category: Photo & Video

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #04 – Instagram

By Instagram, Inc.

Category: Photo & Video

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



## #05 – Snapchat

By Snapchat, Inc.

Category: Photo & Video

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #06 – Trivia Crack

By Etermax

Category: Games

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #07 – Pandora Radio

By Pandora Media, Inc.

Category: Music

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



## #08 – Jelly Jump

By By Ketchapp

Category: Games

Requires iOS 4.3 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #09 – Agent Alice

By wooga

Category: Games

Requires iOS 7.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



## #10 – iTunes U

By Apple

Category: Education

Requires iOS 7.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.

# TOP Free Apps



## #01 – OS X Yosemite

By Apple  
Category: Utilities  
Compatibility: OS X 10.6.8 or later



## #02 – Xcode

By Apple  
Category: Developer Tools  
Compatibility: OS X 10.8.4 or later



## #03 – Microsoft Remote Desktop

By Microsoft Corporation  
Category: Business  
Compatibility: OS X 10.7 or later, 64-bit processor



## #04 – Kindle

By AMZN Mobile LLC  
Category: Reference  
Compatibility: OS X 10.6 or later



## #05 – The Unarchiver

By Dag Agren  
Category: Utilities  
Compatibility: OS X 10.6.0 or later



## #06 – Slack

By Slack Technologies, Inc.  
Category: Business  
Compatibility: OS X 10.6 or later, 64-bit processor



## #07 – Bitdefender Virus Scanner

By Bitdefender SRL  
Category: Utilities  
Compatibility: OS X 10.7 or later, 64-bit processor



## #08 – App for Instagram - Instant at your desktop!

By Joacim Ståhl  
Category: Social Networking  
Compatibility: OS X 10.7 or later, 64-bit processor



## #09 – Microsoft OneNote

By Microsoft Corporation  
Category: Productivity  
Compatibility: OS X 10.9 or later



## #10 – App for Netflix

By Joacim Ståhl  
Category: Entertainment  
Compatibility: OS X 10.7 or later, 64-bit processor

Mac OS X

# TOP Paid Apps

iOS



## #01 – Minecraft – Pocket Edition

By Mojang

Category: Games / Price: \$6.99

Requires iOS 5.1.1 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #02 – Trivia Crack (Ad Free)

By Etermax

Category: Games / Price: \$2.99

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #03 – Heads Up!

By Warner Bros.

Category: Games / Price: \$0.99

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #04 – Scholly: Scholarship Search

By Scholly, LLC

Category: Education / Price: \$0.99

Requires iOS 7.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #05 – Monument Valley

By ustwo™

Category: Games / Price: \$3.99

Requires iOS 6.0 or later. Compatible with iPhone 4, iPhone 4S, iPhone 5, iPhone 5c, iPhone 5s, iPhone 6, iPhone 6 Plus, iPad, and iPod touch. This app is optimized for iPhone 5.



## #06 – Five Nights at Freddy's 2

By Scott Cawthon

Category: Games / Price: \$2.99

Requires iOS 5.1 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #07 – Geometry Dash

By RobTop Games AB

Category: Games / Price: \$1.99

Requires iOS 5.2 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #08 – Fruit Ninja

By Halfbrick Studios

Category: Games / Price: \$0.99

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #09 – Afterlight

By Afterlight Collective, Inc

Category: Photo & Video / Price: \$0.99

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #10 – Facetune

By Lightricks Ltd.

Category: Photo & Video / Price: \$3.99

Requires iOS 6.0 or later. Compatible with iPhone 4, iPhone 4S, iPhone 5, iPhone 5c, iPhone 5s, iPhone 6, iPhone 6 Plus, iPad, and iPod touch. This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.

# TOP Paid Apps



## #01 – GarageBand

By Apple  
Category: Music / Price: \$4.99  
Compatibility: OS X 10.9 or later



## #02 – Folder Designer

By FIPLAB Ltd  
Category: Utilities / Price: \$1.99  
Compatibility: OS X 10.8.4 or later, 64-bit processor



## #03 – OS X Server

By Apple  
Category: Utilities / Price: \$19.99  
Compatibility: OS X 10.9.5 or later



## #04 – FaceTime

By Apple  
Category: Social Networking / Price: \$0.99  
Compatibility: OS X 10.6.6 or later



## #05 – Disk Doctor

By FIPLAB Ltd  
Category: Utilities / Price: \$2.99  
Compatibility: OS X 10.7.3 or later, 64-bit processor



## #06 – Logic Pro X

By Apple  
Category: Music / Price: \$199.99  
Compatibility: OS X 10.8.4 or later, 64-bit processor



## #07 – Final Cut Pro

By Apple  
Category: Video / Price: \$299.99  
Compatibility: OS X 10.9.2 or later, 64-bit processor



## #08 – AntiVirus Sentinel Pro

By Calin Popescu  
Category: Utilities / Price: \$9.99  
Compatibility: OS X 10.7 or later, 64-bit processor



## #09 – Duplicate Detective

By FIPLAB Ltd  
Category: Utilities / Price: \$1.99  
Compatibility: OS X 10.7 or later, 64-bit processor



## #10 – BetterSnapTool

By Andreas Hegenberg  
Category: Productivity / Price: \$1.99  
Compatibility: OS X 10.6 or later, 64-bit processor

Mac OS X

# iTunes

## Review



Trailer

# Movies & TV Shows

Rotten Tomatoes



71 %



[iTunes Preview](#)



by Rob Marshall  
Genre: Musicals  
Released: 2014  
Price: \$19.99

★★★★★  
503 Ratings

# Into the Woods

A baker and his wife (James Corden and Emily Blunt) who wish to start a family against a curse put on them by a vengeful witch (Meryl Streep) is the focal point of this fantasy genre crossover that explores the consequences of its characters' desires and actions, inspired by such Brothers Grimm fairytales as "Little Red Riding Hood", "Jack and the Beanstalk" and "Cinderella".

## FIVE FACTS:

1. Into the Woods is a fantasy musical drama film.
2. It has been adapted to the screen by James Lapine, **from his and Stephen Sondheim's Tony Award-winning Broadway musical of the same name.**
3. Other members of its ensemble cast include Anna Kendrick, Chris Pine, Tracey Ullman, Christine Baranski and Johnny Depp.
4. Principal photography took place entirely in the United Kingdom, including at Shepperton Studios in London.
5. The movie was nominated for three Academy Awards and three Golden Globe Awards.





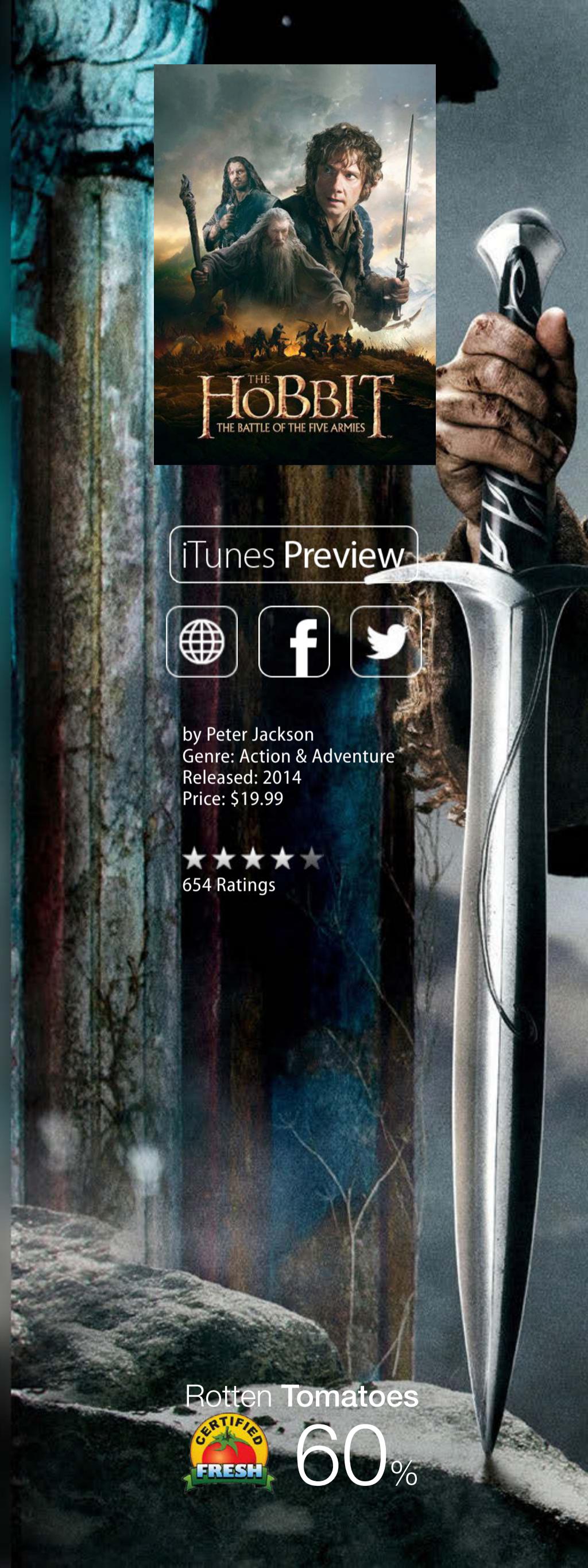
*Interview with Emily Blunt and James Corden*

# The Hobbit: The Battle of The Five Armies

Finally bringing an end to Peter Jackson's six-part film adaptation of the work of J. R. R. Tolkien is this third part of The Hobbit trilogy, starring - as per usual - Martin Freeman as Bilbo Baggins and Ian McKellen as Gandalf. Set in middle earth 60 years before Lord of the Rings, Five Armies continues Baggins' quest to reclaim the lost Dwarf Kingdom from the fearsome dragon Smaug.

## FIVE FACTS:

1. Five Armies is the third part of The Hobbit trilogy that began with An Unexpected Journey (2012) and continued with The Desolation of Smaug (2013).
2. All three films are based on Tolkien's fantasy novel and children's book The Hobbit, or There and Back Again.
3. Other cast members include Richard Armitage, Evangeline Lilly, Lee Pace, Luke Evans and Benedict Cumberbatch.
4. The movie **grossed \$955,050,634 worldwide.**
5. It also received an Academy Award nomination, for Best Sound Editing.



iTunes Preview



by Peter Jackson  
Genre: Action & Adventure  
Released: 2014  
Price: \$19.99

★★★★★  
654 Ratings

Rotten Tomatoes  
CERTIFIED FRESH  
60%



*Trailer*





*Interview with Martin Freeman*

# iTunes

Review

# Music





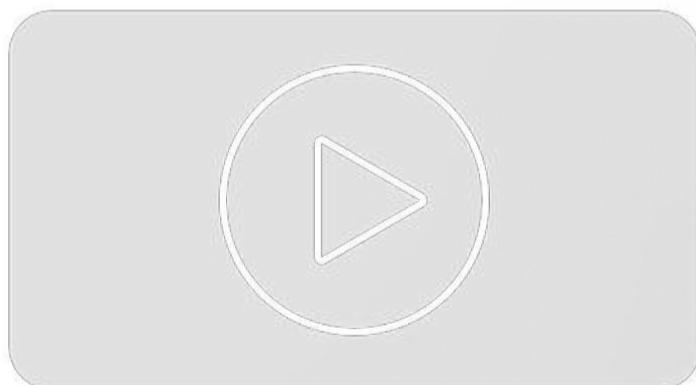
[iTunes Preview](#)



Genre: Hip-Hop/Rap  
Released: Mar 23, 2015  
10 Songs  
Price: \$9.99



638 Ratings



*Grief*

# I Don't Like S\*\*t, I Don't Go Outside: An Album by Earl Sweatshirt

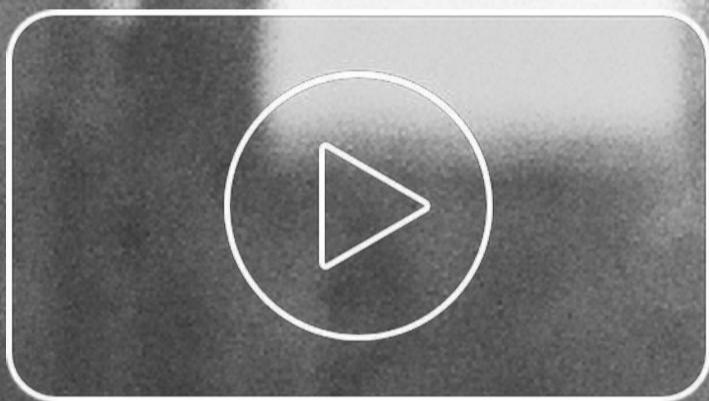
## Earl Sweatshirt

Following up his critically and commercially successful debut album *Doris* was always going to be quite the ask for Los Angeles native Earl Sweatshirt, but this intriguingly-titled sophomore effort sees him continue to demonstrate his worth outside the bounds of his hip hop collective Odd Future - "Grief" having already been issued as its lead single.

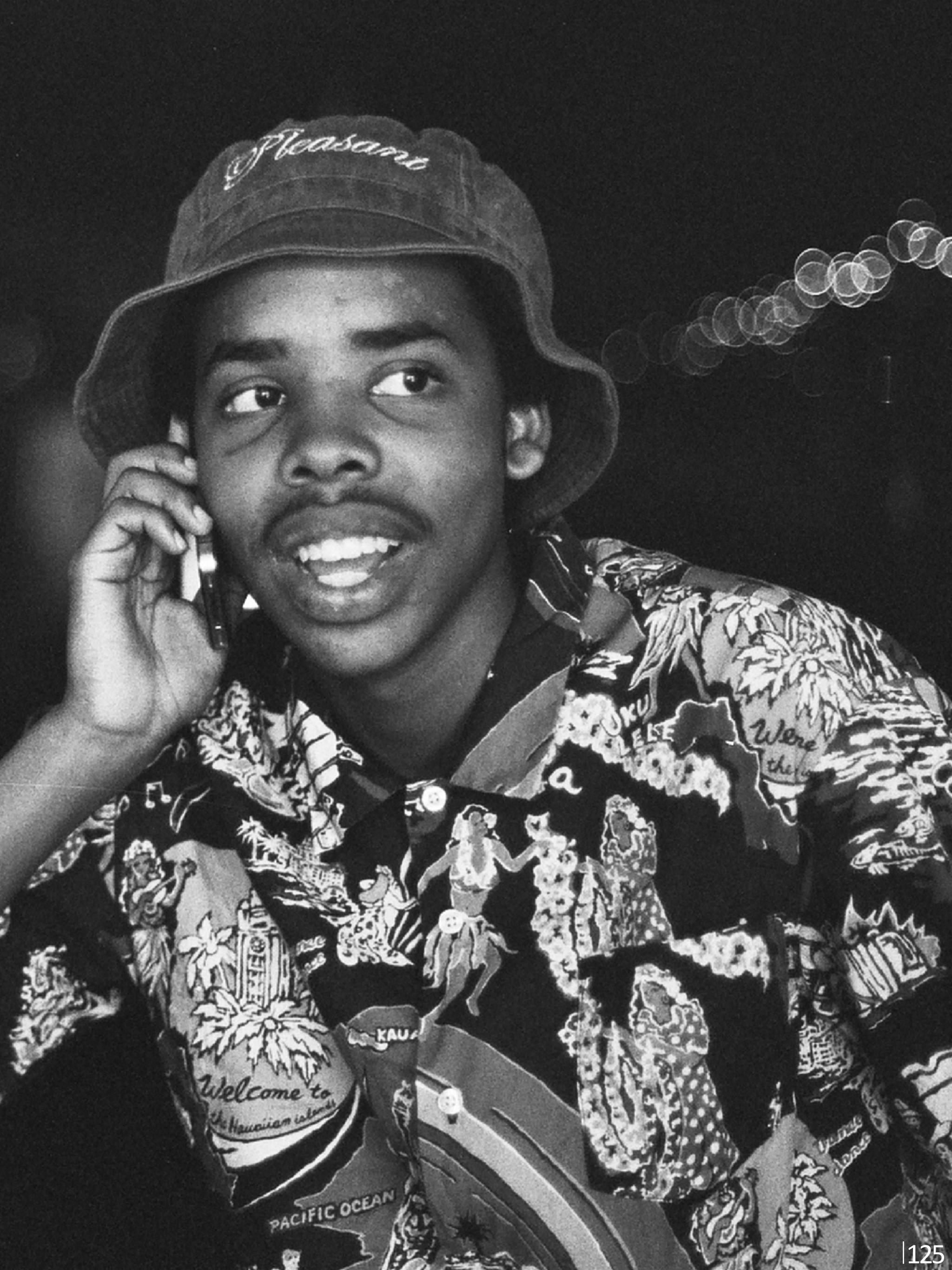
### FIVE FACTS:

1. Earl Sweatshirt is the stage name of Thebe Neruda Kgositile.
2. His debut mixtape, *Earl*, garnered him recognition and critical praise when released in 2010.
3. *Doris* was released in 2013 and debuted at number five on the US Billboard 200.
4. The new album was largely produced by the artist under the pseudonym *randomblackdude*.
5. Earl Sweatshirt **was also nominated for Rookie of the Year at the BET Hip Hop Awards in 2013.**

See more in  
[iTunes](#)



*At Home With Earl Sweatshirt*



# Mr. Wonderful

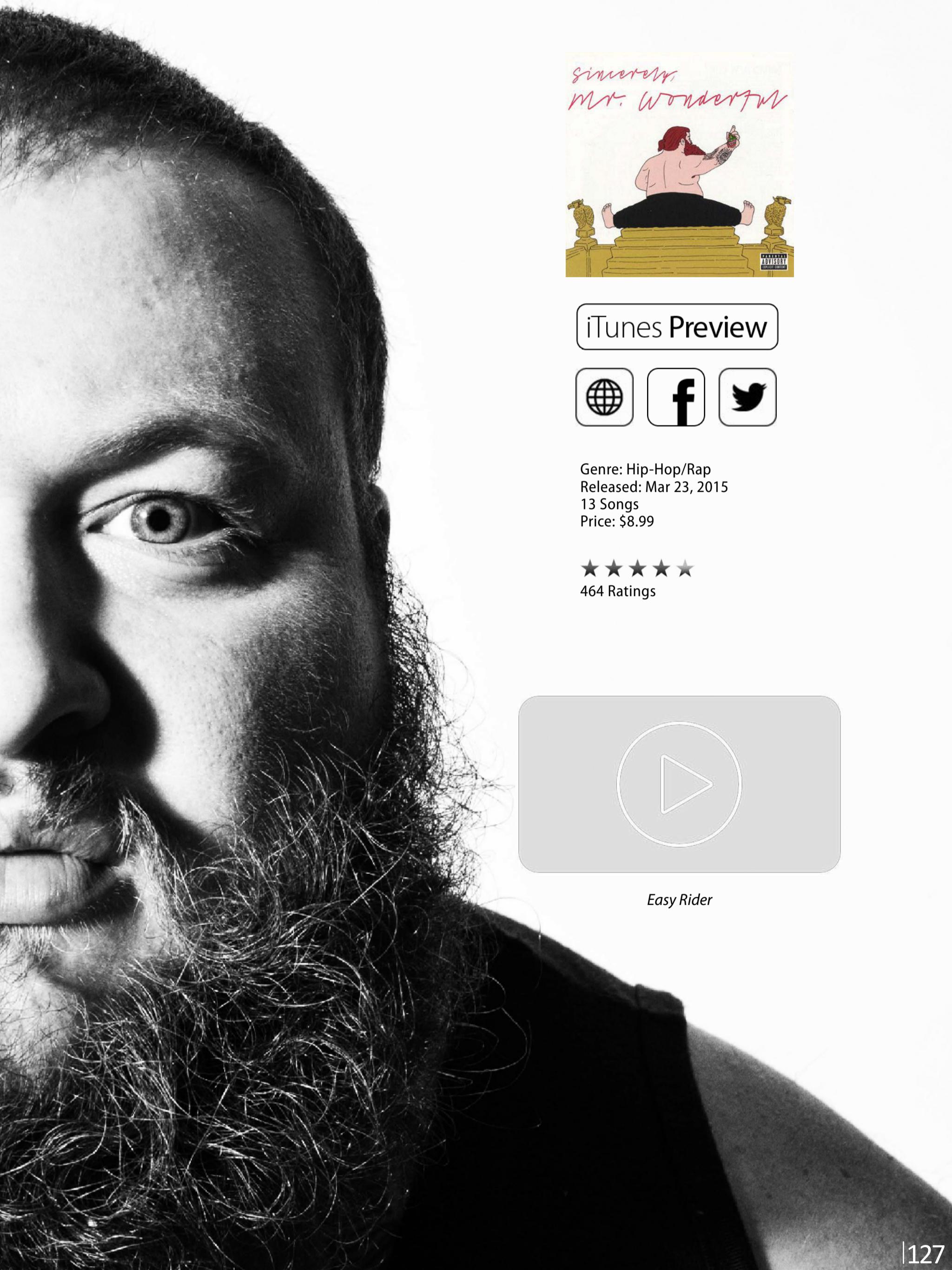
## Action Bronson

Former New York City chef Action Bronson releases his second studio album in the best possible style, enlisting the services of such big name producers as Mark Ronson, The Alchemist and Noah "40" Shebib. It's his first album release for a major label since he signed with the Atlantic Records imprint, Vice Records, in late 2012.

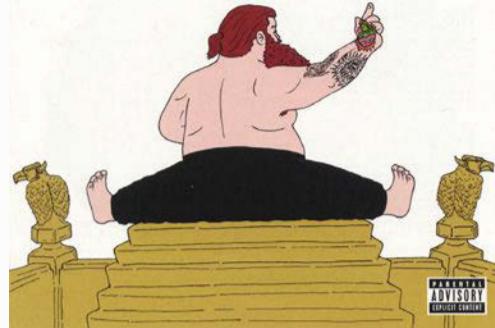
### FIVE FACTS:

1. Action Bronson was born Arian Arslani on December 2, 1983.
2. Formerly a respected gourmet chef in New York City, **he turned solely to a music career after breaking his leg in the kitchen.**
3. His debut studio album was the independently-released Dr. Lecter in 2011.
4. Collaborations with producers Statik Selektah, The Alchemist and Harry Fraud also gained him major attention.
5. He has **said that the title of the new album, Mr. Wonderful, is "the only thing to describe me".**





sincerely  
mr. wondertr



[iTunes Preview](#)



Genre: Hip-Hop/Rap

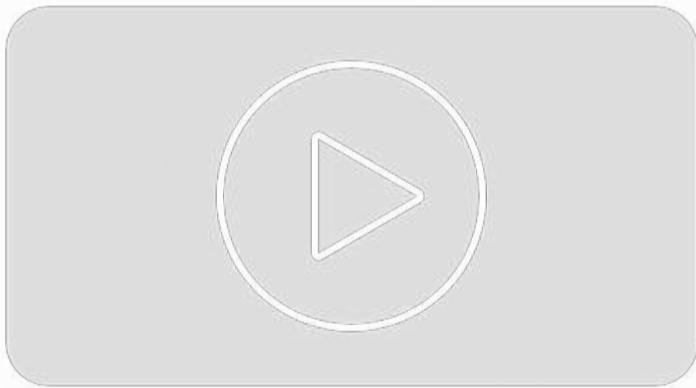
Released: Mar 23, 2015

13 Songs

Price: \$8.99



464 Ratings



*Easy Rider*



TERRA  
TERRA



*Interview with Action Bronson*

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Google Play and search for Magzter



From your Windows8 device please go to  
Windows Store and search for Magzter

# SCIENCE





WHAT TO PACK  
FOR YEAR IN  
SPACE?  
A 'SUPERHERO  
UTILITY BELT'





What's one thing astronaut Scott Kelly can't do without when he moves into space this week for a year? A belt.

Kelly went beltless during his five-month mission at the International Space Station a few years back, and he hated how his shirttails kept floating out of his pants. So this time, the 51-year-old retired Navy captain packed "a military, tactical-style thing" that can hold a tool pouch.

Actually, scratch pouch. He prefers "superhero utility belt."

Kelly's partner on the yearlong stay at the space station - Russian cosmonaut Mikhail Kornienko - can't do without his vitamins. When their Soyuz rocket blasts off from Kazakhstan on Saturday (Friday afternoon in the U.S.), three bottles of over-age-50 vitamins will be on board.

After more than two years of training, Kelly and Kornienko are eager to get going. It will be the longest space mission ever for NASA, and the longest in almost two decades for the Russian Space Agency, which holds the record at 14 months.

Medicine and technology have made huge leaps since then, and the world's space agencies need to know how the body adapts to an entire year of weightlessness before committing to even longer Mars expeditions. More yearlong missions are planned, with an ultimate goal of 12 test subjects. The typical station stint is six months.

"We know a lot about six months. But we know almost nothing about what happens between six and 12 months in space," said NASA's space station program scientist, Julie Robinson.

Among the more common space afflictions: weakened bones and muscles, and impaired vision and immune system. Then there is the psychological toll.









Russian cosmonaut Gennady Padalka, a frequent flier who will accompany Kelly and Kornienko into orbit, predicts it will be the psychological - not physical - effects that will be toughest on the one-year crew.

“Being far away from Earth, being sort of crammed, having few people to interact with,” Padalka said. He’ll break the record for most time spent in space during his six-month stay, closing in on a grand total of 900 days by the time he returns to Earth in September.

Neither Kelly nor Kornienko, though, worries about himself. They fret about the family and friends they are leaving behind for an entire year - until next March.

“If something happens ... you’re not coming home, no matter what it is. You’re not coming back,” Kelly said in an interview earlier this year with The Associated Press.

Kelly’s loved ones include: his two daughters, ages 20 and 11; his NASA-employed girlfriend; his widowed father; his identical twin brother Mark, a retired astronaut; and his sister-in-law, Gabrielle Giffords, a former congresswoman who barely survived an assassination attempt while he was at the space station in 2011.

Kornienko, 54, a former paratrooper, worries how his wife will cope alone at their country house outside Moscow. His 32-year-old daughter is a new mother; the baby is not quite a year old.

Wife Irina cried when she learned in 2012 that he’d be leaving Earth for a whole year. And she’s still not happy about it, Kornienko told the AP.









"She understands that it's a dangerous mission. But she's getting used to the idea," he said.

A vivid reminder of the dangers of spaceflight hit home last fall when an unmanned supply ship blew up shortly after liftoff from Virginia. Kelly's original "superhero" belt was destroyed, along with the rest of the station cargo. Replacements went up on the next commercial shipment.

The two veteran space fliers are fully aware of all the risks. Kelly has flown in space three times for a total of 180 days. (Two of those trips were space shuttle quickies.) Kornienko has a single 176-day station flight on his resume.

Kelly acknowledges it will be a challenge "keeping the level of fatigue down, enthusiasm up, energy reserves to respond to an emergency."

Newly returned space station commander Butch Wilmore urges some three-day weekends for the pair.

"To maintain that mental focus for six months is difficult, and to do it for an entire year ... You don't want to make any mistakes," said Wilmore, whose 5 1/2-month mission ended March 11.

Kornienko was selected by his bosses for the job while Kelly volunteered.

NASA actually got a 2-for-1 bonus with Kelly. He is teaming up with brother Mark for a battery of medical tests so researchers can compare the physique and physiology of the space twin with his genetic double on the ground. Raised by police-officer parents, they've lived parallel lives as Navy fighter and test pilots and space shuttle commanders.

Mark Kelly, a four-time space flier, will be at the Baikonur Cosmodrome in Kazakhstan for his brother's launch; wife Giffords will watch from Houston with Johnson Space Center friends. He's already submitted to numerous blood draws and ultrasounds in the name of space science.









"All right, do whatever you've got to do," Mark said he tells the doctors.

As for what Scott will endure, "Imagine if you went to work where your office was and then you had to stay in that place for a year and not go outside, right? Kind of a challenge," Mark said in an AP interview.

At least Scott Kelly will get outside for a spacewalk this time. Considerable work is needed to prepare the orbiting lab for the 2017 arrival of U.S. commercial crew capsules. So the year will be unusually busy, noted NASA's space station program manager Mike Suffredini, "a good thing" on such a long haul.

Another plus is that Kelly and Kornienko seem to honestly like one another. And they won't be alone. There are normally six people on board and lots of compartments, including three full-scale laboratories, in which to disappear. Besides, the U.S. and Russian crews generally spend their workdays on their respective sides, Kelly noted. The total interior volume is roughly equivalent to two Boeing 747s.

"It's a big place, and I don't really look at it as I'm spending a year with him," Kelly said. "It's more spending a year with 14 other people, and he's one of them."

Among those coming and going, in September, will be British soprano superstar Sarah Brightman. She will visit for 1 1/2 weeks as a paying tourist, and will perform live from on high.

Kelly expects to hear a lot of singing while she's there, but doubts he'll join in.

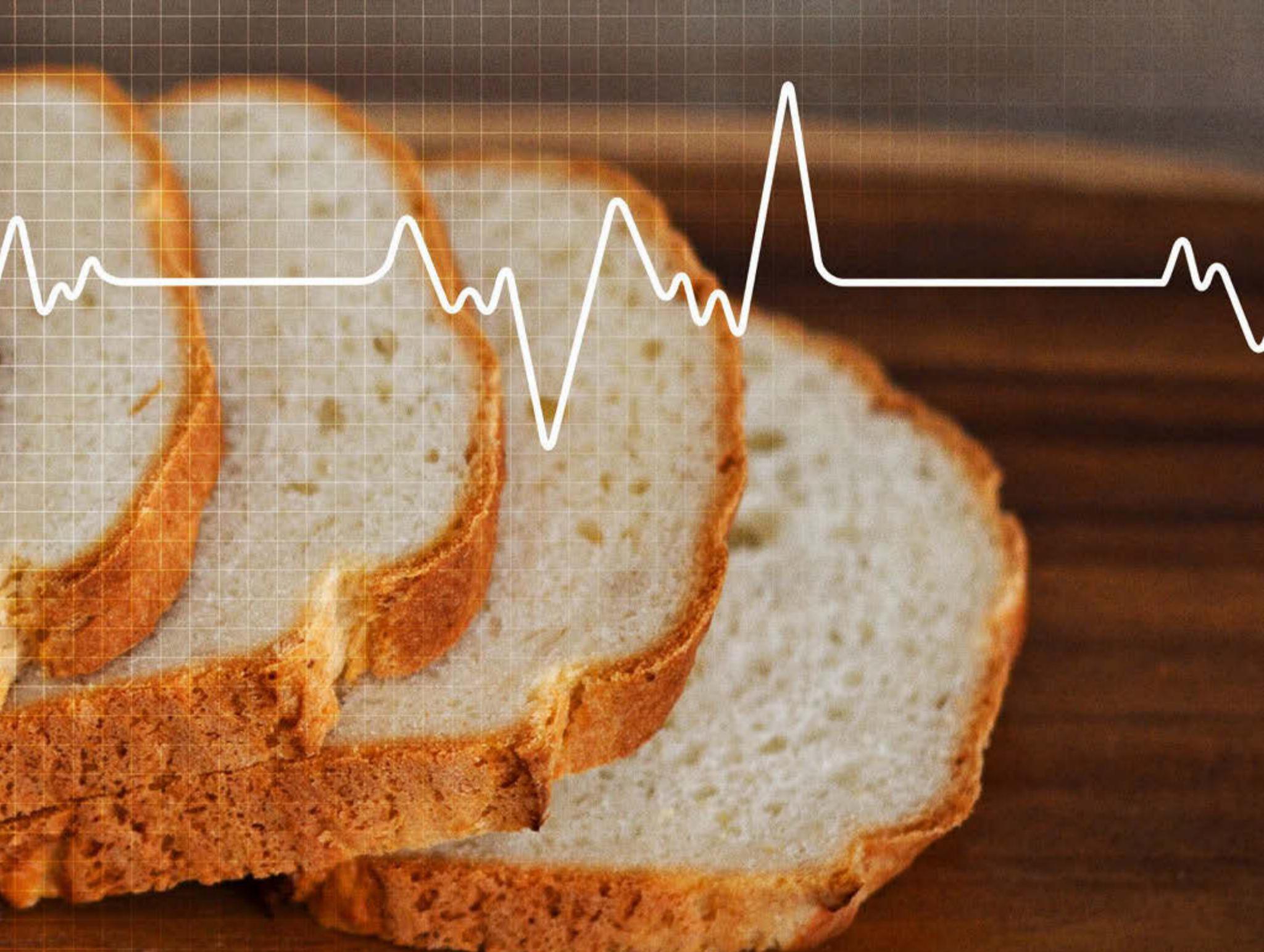
"Never sang before. But I could try, right?" Kelly said with a laugh. "It will be either all of us (singing with her) or none of us."

Online: <http://www.nasa.gov/content/one-year-crew/>



Health





FARMERS  
FUND  
RESEARCH TO  
BREED  
GLUTEN-FREE  
WHEAT





Kansas farmers are paying for genetic research to figure out exactly why some people struggle to digest wheat.

The hard science is aimed at developing new varieties of wheat at a time when the gluten-free industry is worth nearly a billion dollars a year in the U.S. alone.

The Kansas Wheat Commission is spending \$200,000 for the first two years of the project, which is meant to identify everything in wheat's DNA sequences that can trigger a reaction in people suffering from celiac disease, an autoimmune disorder in which eating even tiny amounts of gluten - comprised of numerous, complex proteins that gives dough its elasticity and some flavor to baked goods - can damage the small intestine.

The only known treatment for celiac disease is a gluten-free diet free of any foods that contain wheat, rye, and barley.

"If you know you are producing a crop that is not tolerated well by people, then it's the right thing to do," said the project's lead researcher, Chris Miller, senior director of research for Engrain, a Kansas company that makes products to enhance the nutrition and appearance of products made by the milling and cereal industry.

Though celiac disease is four to five times more common now than 50 years ago, only about 1 percent of the world's population is believed to suffer from it, and just a fraction have been diagnosed. But the gluten-free food business has skyrocketed in the last five years, driven in part by non-celiac sufferers who believe they are intolerant to gluten and look for such products as a healthier alternative.

Sales of gluten-free snacks, crackers, pasta, bread and other products reached \$973 million in the U.S. in 2014, up from \$810 million the previous year, according to a January report by the consumer research firm Packaged Facts,

which analyzed the sales of hundreds of explicitly labeled and marketed gluten-free products and brands at supermarkets, drugstores, and mass merchandisers.

Understanding the causes of celiac disease and gluten intolerance is the goal of a lot of research around the world; Some focuses on human diagnosis and treatment, and others have identified about 20 of the protein fragments in wheat that causes celiac reactions.

But no one has identified all of them, or bred a variety of wheat that is safe for celiac sufferers to eat.

"We are hoping to be one of the first to establish this comprehensive screening of reactive proteins in wheat," Miller said.

The research began in July at the Wheat Innovation Center in Manhattan, Kansas, and remains in its early stages, with researchers extracting proteins from seeds of various varieties of wheat. A later step will be combining the proteins with antibodies produced by the human immune system to test for reactions.

He also plans to examine the wild relatives of wheat as well as modern varieties, and will tap into a Kansas wheat variety repository that dates back to the 1900s in hopes of finding a variety - perhaps one that fell out of favor among commercial farmers - that might already be low in reactivity for celiac sufferers.

Researchers hope to use that variety to develop a gluten-free wheat using traditional breeding methods.

An expert on celiac disease who reviewed Miller's plan online worries that it may prove "too simplistic," and fail to identify all the toxic sequences that can trigger a celiac reaction.

Armin Alaeddini, assistant professor of medical sciences at Columbia University and a researcher at the New York-based school's Celiac Disease





Organic \$3.50

Gluten free

banana Bread



Center, said the project may end up with a less toxic wheat product that isn't completely safe for all celiac disease patients.

"After all this effort, this product that is coming out ... is unlikely to be superior in terms of nutritional value or baking properties and taste to the gluten-free products that are already on the market," Alaedini said.

The medical advisory board for the Celiac Disease Foundation, a nonprofit based in Woodland Hills, California, could not reach a consensus on the viability of Miller's research.

But the organization's CEO, Marilyn Geller, is encouraged.

Her son had been sick his entire life before being diagnosed with celiac disease at age 15, Geller said, and his father also was later diagnosed. Since the disorder is genetic, her grandchildren will be at risk of getting it.

If these research efforts can keep celiac disease in the public eye, more doctors will be aware of it and more federal research dollars may flow, she said.

Many people with the disease would like to "eat actual wheat, with the properties of wheat that make the bread nice and fluffy," she said.

"The idea of having a variety of wheat that they could eat that has those wonderful wheat-like properties would certainly be very interesting for them."





# TOP 10 SONGS

**UPTOWN FUNK (FEAT. BRUNO MARS)**

MARK RONSON

**THINKING OUT LOUD**

ED SHEERAN

**LOVE ME LIKE YOU DO**

**(FROM "FIFTY SHADES OF GREY")**

ELLIE GOULDING

**FOURFIVESECONDS**

RIHANNA AND KANYE WEST AND PAUL McCARTNEY

**EARNED IT**

**(FROM "FIFTY SHADES OF GREY")**

THE WEEKND

**STYLE**

TAYLOR SWIFT

**TIME OF OUR LIVES**

PITBULL

**TAKE ME TO CHURCH**

HOZIER

**GDFR (FEAT. SAGE THE GEMINI & LOOKAS)**

FLO RIDA

**I WANT YOU TO KNOW**

**(FEAT. SELENA GOMEZ)**

ZEDD

A close-up photograph of a woman with dark hair, resting her head on her hand. She is wearing a dark, textured jacket with a zipper. The background is dark and out of focus.

M S N  
E L O N E

# TOP 10 ALBUMS

**FIFTY SHADES OF GREY  
(ORIGINAL MOTION PICTURE SOUNDTRACK)**  
VARIOUS ARTISTS

**1989**  
TAYLOR SWIFT

**X (DELUXE EDITION)**  
ED SHEERAN

**SMOKE + MIRRORS**  
IMAGINE DRAGONS

**SPRING BREAK...CHECKIN' OUT**  
LUKE BRYAN

**SOUND & COLOR**  
ALABAMA SHAKES

**MONTEVALLO**  
SAM HUNT

**AMERICAN BEAUTY/AMERICAN PSYCHO**  
FALL OUT BOY

**PIECE BY PIECE (DELUXE VERSION)**  
KELLY CLARKSON

**IN THE LONELY HOUR (DELUXE VERSION)**  
SAM SMITH

MIT  
-Y HO





# TOP 10 MUSICVIDEOS

**UPTOWN FUNK (FEAT. BRUNO MARS)**  
MARK RONSON

**SHAKE IT OFF**  
TAYLOR SWIFT

**BLANK SPACE**  
TAYLOR SWIFT

**STYLE**  
TAYLOR SWIFT

**ALL ABOUT THAT BASS**  
MEGHAN TRAINOR

**ONE LAST TIME**  
ARIANA GRANDE

**FIRST KISS**  
KID ROCK

**LIVING FOR LOVE**  
MADONNA

**LIPS ARE MOVIN'**  
MEGHAN TRAINOR

**HAPPY (FROM DESPICABLE ME 2)**  
PHARRELL WILLIAMS





# TOP 10 TV SHOWS

**THE DISTANCE**  
*THE WALKING DEAD, SEASON 5*

**IT'S ALL MY FAULT**  
*HOW TO GET AWAY WITH MURDER, SEASON 1*

**THE WANDERER**  
*VIKINGS, SEASON 3*

**THE NIGHT LILA DIED**  
*HOW TO GET AWAY WITH MURDER, SEASON 1*

**HERO**  
*BETTER CALL SAUL, SEASON 1*

**STARING AT THE END**  
*GREY'S ANATOMY, SEASON 11*

**CONNECTION LOST**  
*MODERN FAMILY, SEASON 6*

**INTENT**  
*SUITS, SEASON 4*

**THEM**  
*THE WALKING DEAD, SEASON 5*

**THE INTIMACY ACCELERATION**  
*THE BIG BANG THEORY, SEASON 8*



# TOP 10 BOOKS

**THE GIRL ON THE TRAIN**

PAULA HAWKINS

**FIFTY SHADES DARKER**

E L JAMES

**FIFTY SHADES OF GREY**

E L JAMES

**FIFTY SHADES FREED**

E L JAMES

**A THOUSAND ACRES**

JANE SMILEY

**AMERICAN SNIPER**

CHRIS KYLE AND OTHERS

**FIFTY SHADES TRILOGY BUNDLE**

E L JAMES

**THE NIGHTINGALE**

KRISTIN HANNAH

**STILL ALICE**

LISA GENOVA

**GONE GIRL**

GILLIAN FLYNN

ARE YOU WILLING TO PAY TO WATCH  
VIDEO CLIPS ONLINE?





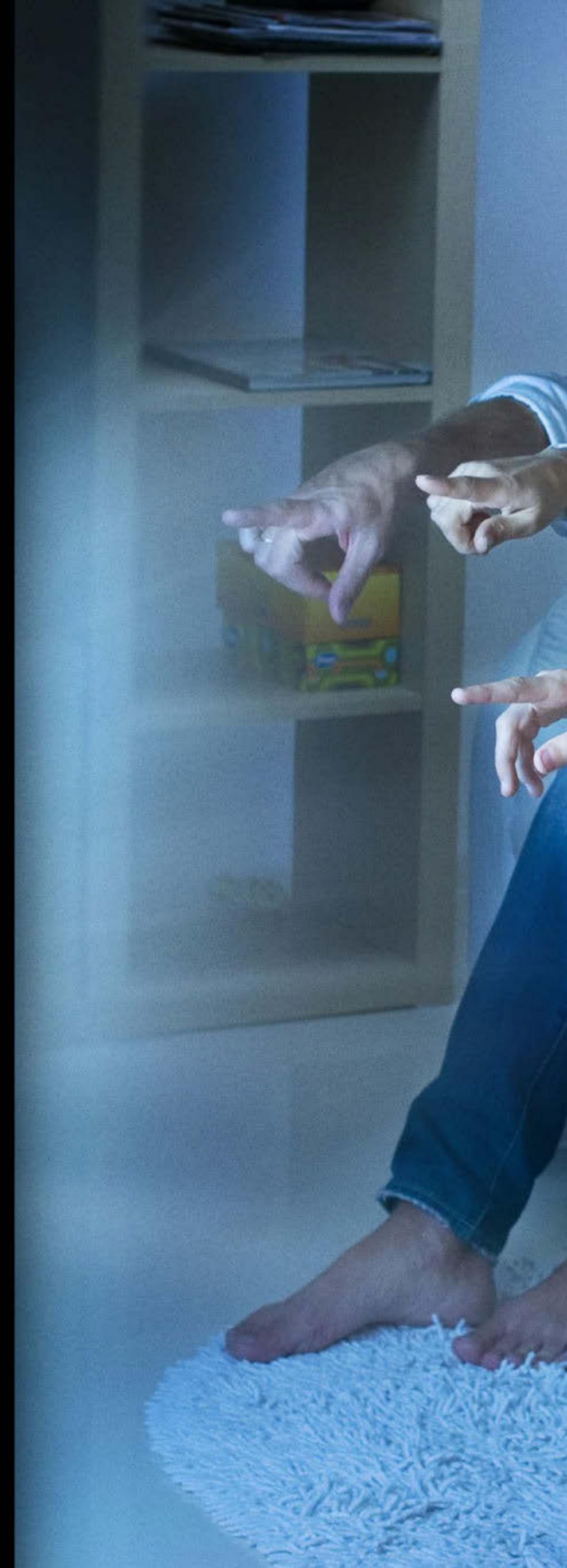
Would you pay to see some of the Internet's best video clips first? Vessel, a new service trying to change the way that short video pieces make money on the Internet and mobile devices, is betting on it.

Instead of free-for-all distribution supported solely by advertising, Vessel will charge \$3 per month for exclusive early access to clips of musicians, sporting events, comedians and many other forms of entertainment not available on YouTube or any other digital video service for at least three days. CEO Jason Kilar, formerly head of Hulu Plus, believes Vessel's model will be able to pay video producers about \$50 per 1,000 views of their clips on the site. That compares with just \$2.20 per 1,000 views of ad-supported video at sites such as YouTube, Kilar says.

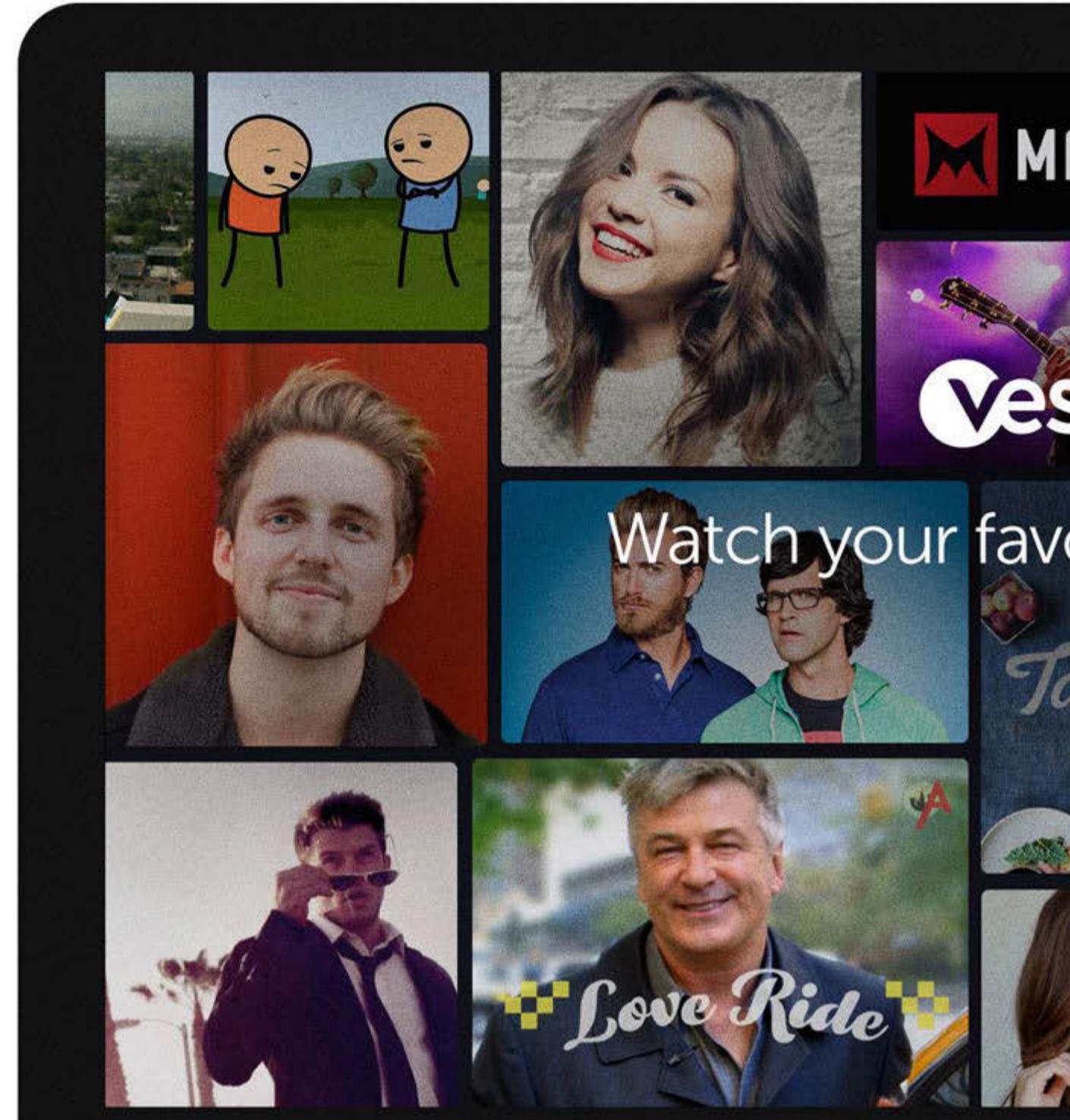
The extra money, in theory, will provide digital video producers with the means and incentive to create even better content that will prod more people to subscribe to Vessel. The same "virtuous cycle" has enabled Internet video service Netflix to finance more of its own original programming and pay more money to license compelling entertainment while its audience has nearly tripled to 57 million customers from 20 million in the past four years.

"We think this is going to be a really big deal, like the advent of cable-and-satellite television in the 1970s," Kilar, 43, says of Vessel.

YouTube, which is owned by Google Inc., says Kilar's estimates are wrong, but declined to reveal its average payout per 1,000 views. Payments to YouTube partners have increased by at least 50 percent in each of the past three years, the company says. Research firm eMarketer Inc. estimated that YouTube's total ad revenue last totaled \$7.6 billion and about \$4.6 billion was paid out to YouTube's partners.













The concept, which has been in beta testing for two months, debuts Tuesday. Anyone who signs up with Vessel by 3 a.m. EDT Friday will receive a one-year subscription for free.

Vessel's ambitions sound like wishful thinking to Forrester Research analyst Jim Nail, who doubts many people will pay to watch a video that will be available for free within a few days.





"That kind of restriction only works when you have content that people are really knocking down the doors to see," Nail says. "It is going to totally come down to what kind of content that they can get. Unless they have the content that justifies paying \$3 a month, nothing will save them."

Vessel so far has about 70,000 video clips separated into about 160 categories, including sports, comedy, music, video games and food. Many clips are free and supported by ads, just like most video on YouTube. Vessel's subscription side features videos from about 130 contributors. They include Emmy Award-winning actor Alec Baldwin, who is showcasing "Love Ride," a series featuring him dispensing relationship advice in the back seat of taxis, and the online comedy duo of Rhett McLaughlin and Link Neal, who have more than 3 million subscribers on their YouTube channel.

Machinima CEO Chad Gutstein anticipates a large audience will pay for early access to the video gaming specialist's clips because video game enthusiasts "are more engaged and more obsessed with what they are doing than anything I have ever experienced. They just want to be there first."

Before Vessel, Kilar spent five years running online television streaming service Hulu, which was launched in 2007 by a group of TV networks trying to counter YouTube's popularity. By the time Kilar stepped down in 2013, Hulu's premium Plus service had attracted about 6 million subscribers, though it never mounted much of a challenge to YouTube, where about 300 hours of video is posted per minute.

Since Kilar and another former Hulu executive Rich Tom started Vessel last year, the San Francisco startup has raised \$77 million from two venture capital firms, Greylock Partners and Benchmark Capital, and Amazon.com Inc. CEO Jeff Bezos.

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